SUNRISE MEDICAL

STERLING®

Mobility Scooter

000691026.UK

ELITE² Mini
ELITE² XS
ELITE² Plus

Instructions for Use

We at SUNRISE MEDICAL have been awarded the ISO-13485 certificate, which affirms the quality of our products at every stage, from R&D to Production. This product complies with the standards set forth in EU and UK directives. Options or accessories shown are available at extra cost.

If you have any queries about the use, maintenance or safety of your product, please contact your local approved Sunrise Medical service agent. If you do not know of an approved dealer in your area or have any other questions, please write or telephone:

Sunrise Medical
Thorns Road
Brierley Hill
West Midlands
DY5 2LD
England
Phone: 0845 605 66 88
Fax: 0845 605 66 89
www.SunriseMedical.co.uk

Dealer signature and stamp

Contents

1.0 User information

Thank you for choosing a Sunrise Medical scooter. Sunrise Medical's high-quality mobility products are designed to enhance independence and make your everyday life easier.
As a part of our ongoing product improvement initiative, Sunrise Medical reserves the right to change specifications and design without notice. However, any changes to information provided for existing users shall be clearly communicated if they are safety critical.
Further, not all features and options offered are compatible with all configurations of the scooter.
All dimensions are approximate and may be subject to change.
The intended lifetime of the scooter is 8 years. Please DO NOT use or fit any 3rd party components to the scooter unless they are officially approved by Sunrise Medical.

1.1 This user manual

This user manual will help you to use and maintain your scooter safely.

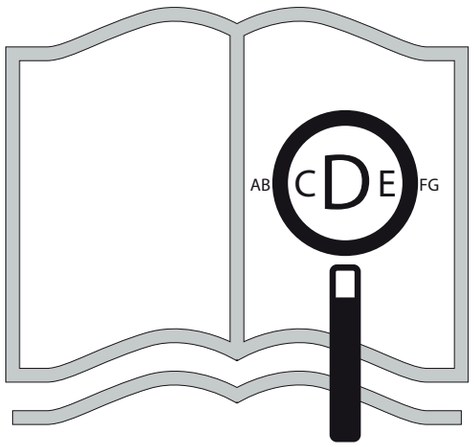
Do not use your scooter until this entire manual has been read and understood!

1.2 For further information

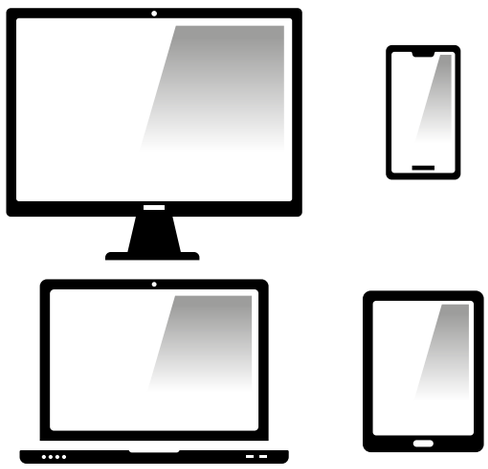
Please contact your local, authorized Sunrise Medical dealer if you have any questions regarding the use, maintenance or safety of your scooter. In case there is no authorized dealer in your area or you have any questions, contact Sunrise Medical either in writing or by telephone.

For information about product safety notices and product recalls, go to **www.SunriseMedical.co.uk**

In the event of a safety-related product change being made by Sunrise Medical, all customers will be contacted and informed of this.



If you are visually impaired, this document can be viewed in PDF format at **www.SunriseMedical.co.uk**



or alternatively is available on request in large text.

1.3 Symbols used in this manual

⚠ **DANGER!**	Potential risk of injury or serious injury or death
⚠ **WARNING!**	Potential risk of injury
⚠ **CAUTION!**	Potential damage to equipment
NOTE!	General advice or best practice
	Reference To Additional Documentation

CE As the manufacturer, SUNRISE MEDICAL, declares that this product conforms to the Medical Device Regulation (2017/745).

UK CA As the manufacturer, SUNRISE MEDICAL, declares that this product conforms to the UK Medical Devices Regulation 2002 No. 618.

NOTE:
General user advice.
Not following these instructions may result in physical injury, damage to the product or damage to the environment!

Notice to the user and/or patient: Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

B4Me special adaptations
Sunrise Medical strongly recommends that in order to ensure that your B4Me product operates, and performs as intended by the manufacturer; all the user information supplied with your B4Me product is read and understood, before the product is first used.

Sunrise Medical also recommends that the user information is not discarded after reading it, but it is kept safely stored for future reference.

Medical Device Combinations (UKCA)
It may be possible to combine this Medical device with one or more other Medical Device or other product. Information on which combinations are possible can be found at www.sunrisemedical.co.uk. All combinations listed have been validated.

Medical Device Combinations
It may be possible to combine this Medical device with one or more other Medical Device or other product. Information on which combinations are possible can be found at www.Sunrisemedical.co.uk. All combinations listed have been validated to meet the General Safety and Performance Requirements, Annex I Nr. 14.1 of the Medical Device Regulation 2017/745.

Guidance on the combination, such as mounting, can be found at www.SunriseMedical.co.uk.

2.0 Safety

Follow the instructions carefully next to these warning symbols! Not paying careful attention to these instructions could result in physical injury or damage to the scooter or the environment. Wherever possible, safety information is provided in the relevant chapter.

2.1 Symbols and labels used on the product

The signs, symbols and instructions affixed to the scooter comprise part of the safety facilities. They must never be covered or removed. They must remain present and clearly legible throughout the entire lifespan of the scooter.
Replace or repair all illegible or damaged signs, symbols and instructions immediately. Please contact your dealer for assistance.

Fig. 2.1 Taxi fixation point
Fig. 2.2 Not crash-tested (Black Scooters only)
Fig. 2.3.1 Maximum user weight for the Elite² Mini = 136 kg
Fig. 2.3.2 Maximum user weight for the Elite² XS = 175 kg
Fig. 2.3.3 Maximum user weight for the Elite² Plus = 175 kg
Fig. 2.4 Freewheel mechanism: outward lever down (A) = freewheel
Fig. 2.5.1 The serial number and information label - Elite² Mini
Fig. 2.5.2 The serial number and information label - Elite² XS
Fig. 2.5.3 The serial number and information label - Elite² Plus
Fig. 2.6.1 Location of Serial Number Label - Elite² Mini Serial Label (next page)
Fig. 2.6.2 Location of Serial Number Label - Elite² Mini UDI Label (next page)
Fig. 2.6.3 Location of Serial Number Label - Elite² XS & Elite² Plus - UDI label (A) & Serial Label (B) (next page)

2.2 Safety: Temperature

⚠ WARNING!

- Avoid physical contact with the scooter's motors at all times. Motors are continuously in motion during use and can reach high temperatures. After use, the motors will cool down slowly. Physical contact could cause burns. Allow the motors after using at least 30 min. to cool down.
- If you do not use the scooter, ensure that it is not exposed to direct sunlight for lengthy periods of time. Certain parts of the scooter, such as the seat, the back and the armrests can become hot if they have been exposed to full sunlight for too long. This may cause burns or allergic reactions to the skin.
- Be aware that in extremely cold weather, exposed metal parts can present a freeze burn hazard, particularly if the hands are wet.


Fig. 2.1


Fig. 2.2

Fig. 2.3.1

Fig. 2.3.2

Fig. 2.3.3

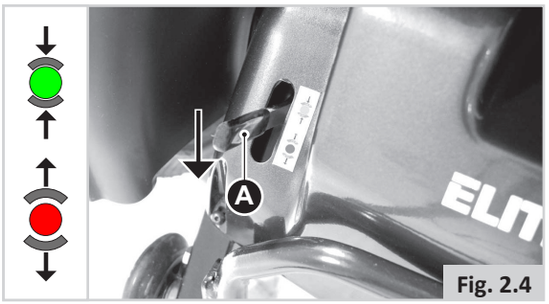


Fig. 2.4

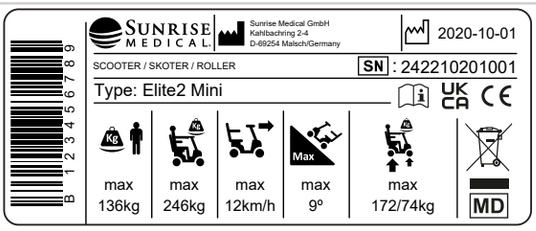


Fig. 2.5.1

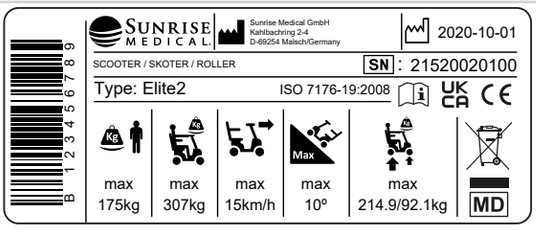


Fig. 2.5.2

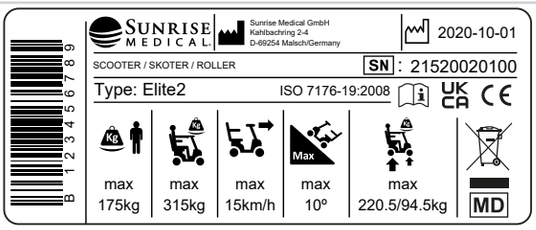


Fig. 2.5.3

2.3 Safety: Moving parts, (Fig.2.7)

⚠ DANGER!

A scooter has moving and rotating parts. Contact with moving parts may result in serious physical injury or damage to the scooter. Contact with the moving parts of the scooter should be avoided.

- Wheels
- Seat rotation lever
- Seat forward/backward positioning lever
- (maybe the) Tiller height adjustment on Elite² Plus

2.4 Safety: Electromagnetic radiation

⚠ CAUTION!

The standard version of your electric scooter has been tested on the applicable requirements with respect to electromagnetic radiation (EMC requirements) In spite of these tests:
It cannot be excluded that electromagnetic radiation may have an influence on the scooter. For example:

- mobile telephony
- large-scale medical apparatus
- other sources of electromagnetic radiation
- It cannot be excluded that the scooter may interfere with electromagnetic fields. For example:
- shop doors
- burglar alarm systems in shops
- garage door openers

In the unlikely event that such problems do occur, we request that you notify your dealer immediately.

⚠ DANGER!

- When operating two-way radio, walkie-talkies, C.B., Amateur radio, public mobile radio and other powerful transmitting devices the scooter should be brought to a halt and turned off.
- The operation of cordless, mobile telephones and cell phones including hands-free devices is permitted but if abnormal operation of the scooter is encountered then the scooter must be brought immediately to a halt and turned off.

Fig. 2.6.1 Elite² Mini Serial Label - right side

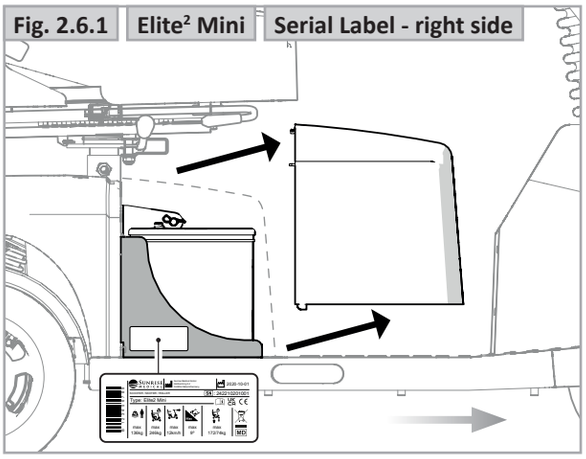


Fig. 2.6.2 Elite² Mini UDI Label - left side

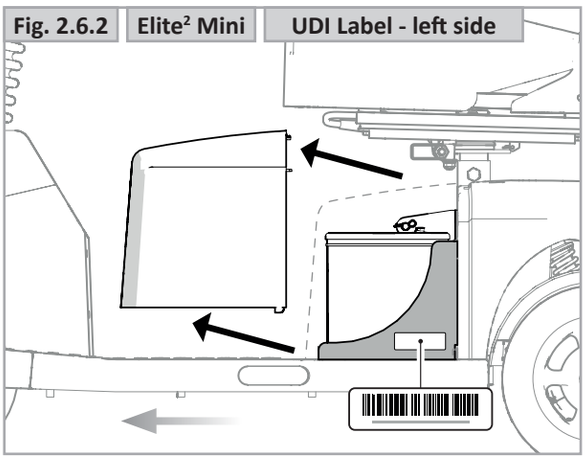


Fig. 2.6.3 Elite² XS & Elite² Plus

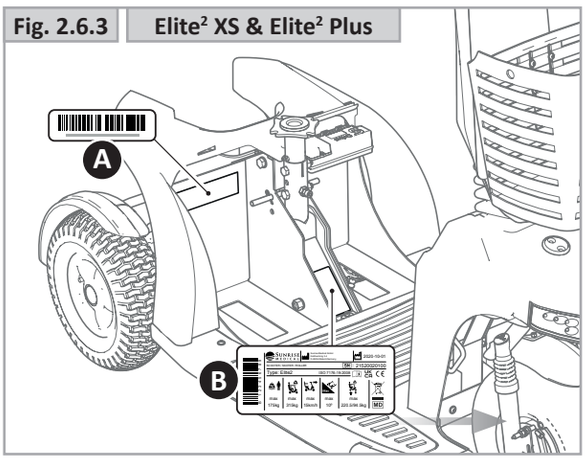
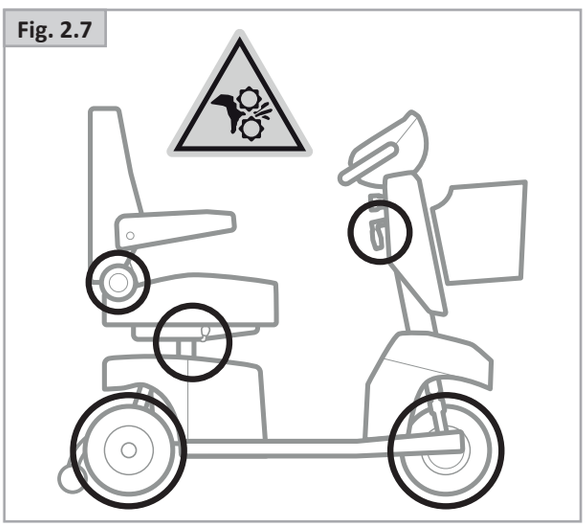


Fig. 2.7



2.6 Safety: Choking hazard

⚠ DANGER!

This mobility aid uses small parts which under certain circumstances may present a choking hazard to young children.

2.7 Ramps for transporting scooter:

⚠ DANGER!

- When using a ramp, please ensure that it is capable of taking the combined weight of the scooter and yourself.
- If a ramp is being used to load a scooter into a vehicle, please ensure the ramp is properly secured to the vehicle.
- Always approach the ramp head-on and exercise caution.
- Please ensure the ramp is suitable for the product you are transporting.
- Maximum ramp angle = 10° (18%)
- Follow all the user instructions supplied with the ramp.
- Be aware that accessories attached to the scooter, may affect the overall stability.

⚠ DANGER!

- Ensure that the user and all carers fully understand the lift manufacturer's instructions for using the passenger lift.
- Never exceed the lift manufacturer's recommended safe working load and load distribution guidance.
- Always turn off all power when you are on the lift. If you fail to do so, you may touch the wigwag or side throttle/controls by accident and cause your scooter to drive off the platform. Be aware that a roll-stop at the end of the platform may not prevent this.
- Always position the user securely in the scooter to help avoid falls while on the lift.
- Always ensure the scooter is in drive mode when using passenger lift (wheels locked not in freewheel mode).

2.8 Safety: Lifting the scooter

⚠ WARNING!

- Do not lift this scooter, seat or batteries by any parts that are removable, doing so may result in damage to the scooter or injury to the user.

3.0 Intended use of the scooter

General description

This Sterling Elite² scooter range is designed for comfort, safety and durability.

Due to its modular design, simplicity and wide range of adjustments, the Sterling Elite² scooter range is a perfect choice for easy service, refurbishment and recycle requirements.

The Sterling Elite² scooter range fulfils individual preferences, needs or circumstances and is available in the following configurations:

- Sterling Elite² Mini
- Sterling Elite² XS
- Sterling Elite² Plus

3.1 Area of application: The user

Scooters are exclusively for a user who may have difficulty walking distances or for periods of time, for their own personal use indoors and outdoors.

Driving a scooter requires cognitive, physical and visual skills.

The user must be able to estimate and correct the results of actions when operating the scooter.

The scooter cannot transport more than 1 person at a time. The maximum weight limit (includes both the user and any weight of accessories fitted to the scooter) is marked on the serial number label, which is affixed to the chassis of the scooter (Figs. 2.6.1, 2.6.2 and 2.6.3).

For restrictions on user weight limit refer to technical specification, chapter 11.

The user must be informed of the contents of this user manual before driving the scooter. In addition, the user of the scooter must be given thorough instruction by a qualified specialist before he or she participates in traffic. The first sessions in the scooter should be practiced under supervision of a trainer/ advisor.

Indications

The varieties of fitting variants, as well as the modular design, mean that it can be used by those who cannot walk or have limited mobility because of:

- Paralysis
- Loss of extremity (leg amputation)
- Extremity defect deformity
- Joint contractures/joint injuries
- Strokes and brain injuries
- Neurological disabilities
- Illnesses such as heart and circulation deficiencies, disturbance of equilibrium or cachexia as well as for elderly people who still have strength in the upper body.

Contraindications

The mobility scooter shall not be used in case of:

- Perception disorder
- Imbalance
- Loss of both arms
- Joint contracture/joint damage on both arms
- Seating disability

Fig. 3.1

Basic Components (Fig.3.1).

1. SEAT
2. CONTROLS
3. TILLER
4. ARMRESTS
5. WHEELS
6. BATTERY BOX
7. FOOT BOARD
8. LIGHTS
9. FRONT BASKET (MAX. 5kg)

NOTE:

Please note that driving a wheelchair requires sufficient cognitive, physical and visual skills. The user must be able to assess the effects of actions during the operation of the wheelchair and, if necessary, to correct them. These capabilities and the safe use of the additionally attached components cannot be assessed by Sunrise Medical as a manufacturer. We cannot accept any liability for any damage resulting from this.

Please refer to the operating instructions of the wheelchair and the additionally mounted components. Instruct the user in the safe use of the wheelchair and the additionally mounted components. Inform users of specific warnings that need to be read, understood, and respected.

⚠ WARNING!

- If you are under the influence of medicines that can have an effect on your ability to drive, you are not permitted to drive a scooter.
- Adequate vision is required in order to safely operate a scooter in the user situation concerned.
- Not more than one person at a time can be seated in the scooter.
- Do not allow children to ride in the scooter unsupervised.

⚠ CAUTION!

- The user of the scooter is at all times completely responsible for complying with the applicable local safety regulations and guidelines.

3.2 Area of application: The user environment

Class B Scooter's are usually large in size, not necessarily intended for indoor use but capable of travelling longer distances and negotiating outdoor obstacles.

They are intended for use in public places and similar locations where there are pavements, pedestrian paths or floors that have hard and firm surfaces. The safe limit for slopes and obstacles shall be observed.

They may be used on the roads in compliance with local country traffic law.

The speed must be adapted to suit the environment.

⚠ WARNING!

- Drive carefully on slippery roads resulting from rain, ice or snow!
- You are required to turn on the lights in case of limited visibility.
- When driving at higher speeds you must be extra careful.
- Select a lower maximum speed indoors, on the pavement and in pedestrian areas.
- Do not drive off high obstacles.
- Do not attach a weight to the scooter without the approval of a qualified specialist. This may negatively affect the stability of the product.

⚠ CAUTION!

- Prevent the scooter from coming into contact with seawater: seawater is caustic and may damage the scooter.
- Prevent the scooter from coming into contact with sand: sand can permeate into the moving parts of the scooter, causing extensive wear on these parts.
- Do not use the scooter if temperatures are below: -25˚C or above +50˚C.
- Do not push and/or tow any objects with the scooter.
- Do not drive through puddles of water.

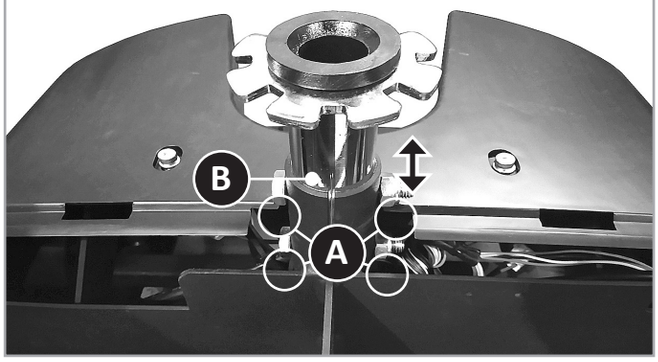
4.0 Setting up the scooter

Sunrise Medical scooters can be adjusted according to specific needs of the user.
Pre-settings are carried out once, the first time the scooter is going to be used. They must be executed by a qualified specialist, unless explicitly stated otherwise.

4.1 Seat height (Fig. 4.1)

1. Loosen (A).
2. Adjust (B) to the desired position.
3. Tighten (A).

Fig. 4.1

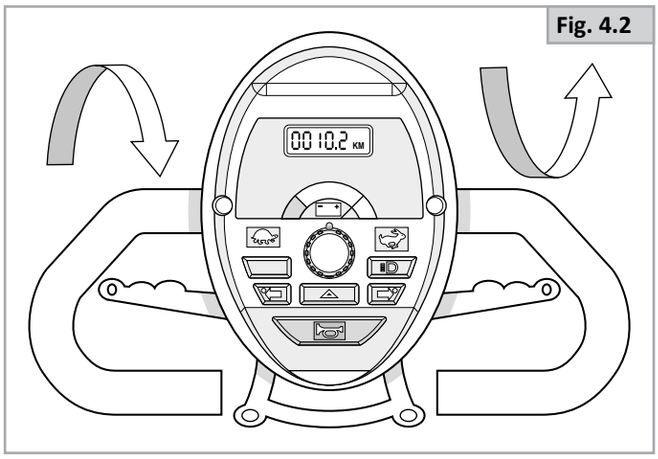


4.2 Handlebar Adjustment

⚠ CAUTION!

The handlebar angle can be adjusted to suit the users needs, (Fig 4.2). The handlebar is clamped within the control system. Your dealer or supplier can adjust the angle of the handlebar if needed. Do not attempt adjustment of this yourself. Damage to the control system of the scooter could happen if unauthorized adjustment is carried out.

Fig. 4.2

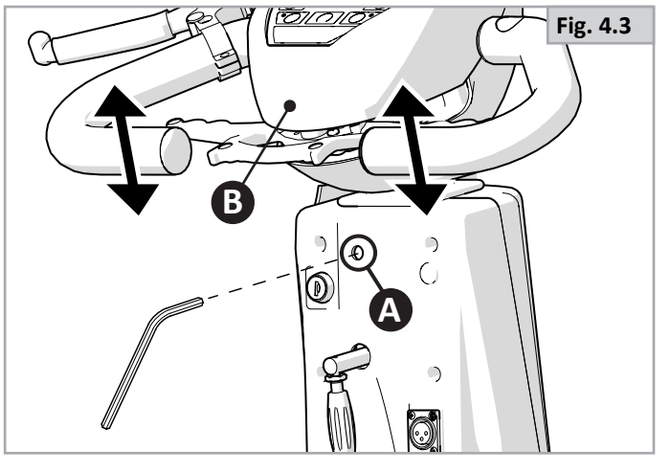


4.3 Elite² Plus tiller height adjustment (Fig. 4.3)

The Elite² Plus tiller has a standard height adjustment of 0mm – 50mm.

1. Loosen (A), with 6 mm Allen key.
2. Adjust (B) to the desired position, carefully pull the tiller up using the tiller steering handle.
3. Tighten (A).

Fig. 4.3



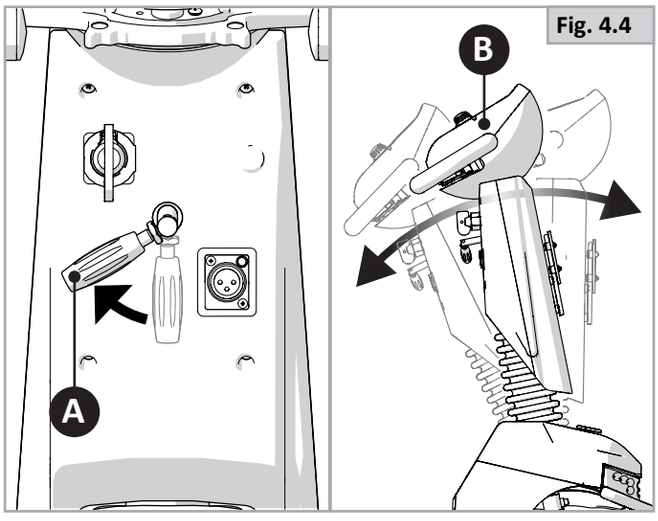
4.4 Tiller Adjustment (executed by the user) (Fig. 4.4)

⚠ DANGER!

- Do not adjust the tiller while the scooter is being driven as serious injury could happen if you lose control.
- Do not use the tiller adjustment handle to hold or carry items such as bags etc.
- Ensure fingers or other items are not around the area of the lower tiller when making adjustments. Serious injury could happen due to entrapment.

1. Rotate (A) clockwise.
2. Hold (B) and move to the required position.
3. Once a satisfactory position is found for (B), release (A).
4. To reset (B) to original position, turn (A) clockwise again.

Fig. 4.4



4.5 Back angle (executed by the user) (Fig. 4.5)

1. Adjust by turning (A).

⚠ WARNING!

Take care when adjusting the back angle as it could be possible to fall backwards and harm the user or the scooter.

- When adjusting the back angle, be careful not to get your fingers caught.

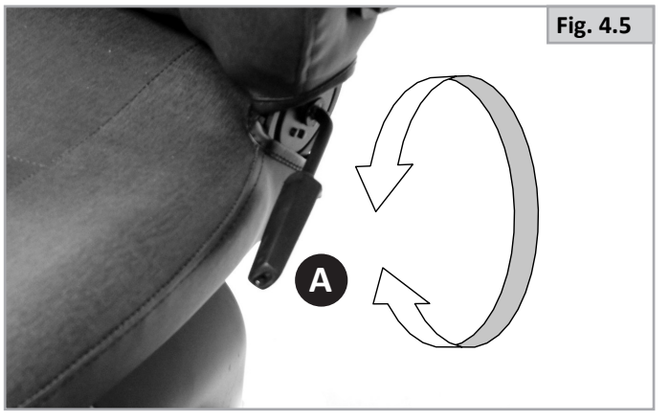


Fig. 4.5

4.6 Lumbar support (executed by the user) (Fig. 4.6)

NOTE: Does not apply to the Elite2 Mini

1. Adjust by turning (B).

Fig. 4.6

4.7 Seat position (executed by the user) (Fig. 4.7)

1. Pull (A) to slide forward or backward.

2. Release (A)

Fig. 4.7

4.8 Armrest angle (executed by the user) (Fig. 4.8)

1. Turn (A).

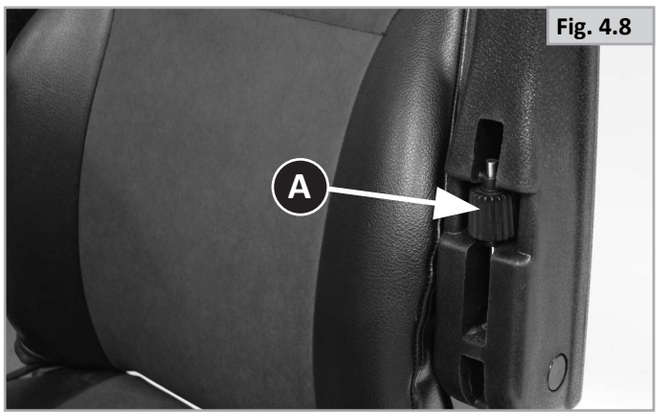


Fig. 4.8

4.9 Control system programme

This scooter is equipped with a control system that can be programmed by adjusting settings within the system. This is a specialized job that needs training and can only be adjusted with professional software. The end user is not allowed to adjust these settings.

⚠ DANGER!

The incorrect setting of the parameters for the control system may result in very dangerous situations.
Settings must be made by qualified specialists.

4.10 Lap strap / seating positioning belt

⚠ DANGER! / WARNING!

- This product is only to be used to position a single person in a scooter.

Mounting a lap strap / seating positioning belt
The lap belt is fitted to the scooter as shown in the fitting photographs, (Fig.4.9 - 4.10). It is important that the belt is fitted correctly and is not twisted.
The belt is adjusted automatically to the correct tension by the internal reel system.

To lock the belt:

Pull the buckle over your lap and push firmly into the slot in the receiver, (1).
The belt will adjust to the correct tension.

To release the belt:

Push the red button marked 'PRESS' to release the belt, (2), (Fig 4.11).


Fig. 4.9


Fig. 4.10

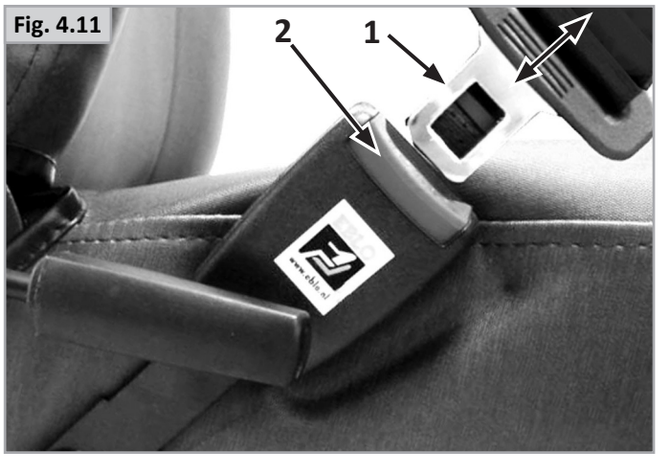


Fig. 4.11

Positioning an person with a lap strap

- Adjust the lap strap to suit, leaving no more than a hand's width gap for comfort and safety (Fig 4.12).
- The hand clearance should be with the lap strap under normal tension and not allow large gaps or loops.
- For your comfort, the Lap Belt must be correctly fitted to the scooter. If you are unsure about the fitting or operation of this option, please contact your approved Sunrise Medical dealer.
- Generally, the lap strap should be fixed so that the straps sit at an angle of approximately 45° (Fig. 4.13), and when correctly adjusted should not allow user to slip down in the seat.
- The lap belt must be checked on a daily basis to ensure it is adjusted correctly and it is free from any obstruction or adverse wear.
- Failure to make sure that the lap belt is secure and adjusted prior to use could cause serious injury to the user. E.g. too loose a strap may allow the user to slip down in the seat and risk suffocation.

⚠ DANGER! / WARNING!

- Always make sure that the lap strap is correctly secured and adjusted prior to use.
- If a strap is too loose it could cause the user to slip down and cause serious injury.
- Check lap strap and securing components at regular intervals for any signs of fray or damage. Replace if necessary.
- When servicing, check for correct operation of the release buckle and for any signs of wear on the material or plastic brackets.
- Regular Checks/Activities:
- As with all positioning components, there is a need for corrective adjustments as the person changes their seating position over time.
- Check the belts regularly for correct fitting, to ensure the safety and comfort of the user.

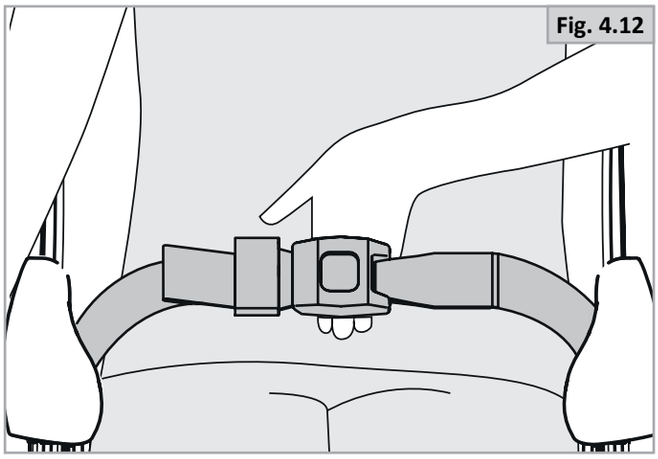


Fig. 4.12

Fig. 4.13

4.11 Anti Tips (Fig. 4.14):

⚠ WARNING!

- Ensure the anti tips are fitted before using the scooter.
- Ensure that anti tips are not damaged or worn before using your scooter.
- Attendants must be aware of the location of the anti tips to prevent feet being trapped underneath causing injury.
- Do not allow adults or children to stand on the anti tips, or any other part of the scooter as this could cause the scooter to become unstable.

Fig. 4.14

4.12 Available OPTIONS.

4.12.1 Foot Control

This can be mounted anywhere on the floor of the scooter or on the raised foot platform. It is used in conjunction with either a twist grip or a side lever control. Two switches are also used, one to switch between forwards and reverse and one to switch between the foot control and the twist grip or side lever control, (Fig.4.15).

⚠ WARNING!

Accidental depression of the pedal while the scooter is switched on, will cause the scooter to move. Exercise caution and always turn the scooter off when not driving.


Fig. 4.15

4.12.2 Twist Grip Throttle

The twist grip control may be used on its own or in conjunction with the foot control. If it is used on its own, it it has a forward/reverse switch supplied. If the twist grip is used in conjunction with the foot control, two switches are used, forwards/reverse and an additional switch to select each control, (Fig.4.16).


Fig. 4.16

4.12.3 Crutch holder (Fig. 4.17)

⚠ WARNING!

- Ensure that the crutch is securely fastened to the crutch holder.
- Ensure that the crutch is not interfering with the mechanisms of the scooter.
- Ensure that the crutch does not protrude from the scooter.
- Do not attempt to remove the crutch whilst the scooter is in motion.


Fig. 4.17

4.12.4 Raised Foot Platform

This is to facilitate the correct knee / leg angle to obtain maximum comfort for users with shorter lower leg lengths.

⚠ WARNING!

Be aware of the extra height from the ground and take care when getting on and off the scooter.

4.12.5 Angle Adjustable Foot Support

The foot support helps to provide extra support for the foot, ankle and leg, helping to prevent cramp and reducing joint pain. It can be mounted anywhere on the floor of the scooter or on the raised foot platform, (Fig.4.18)

Fig. 4.18

4.12.6 Walker - Rollator Mount

This rear mounted frame allows the carriage of Sunrise Medical walkers and rollators on board the scooter, (Fig.4.19).

⚠ WARNING!

- Be aware that attached accessories increase the effective footprint of the scooter.
- Take extra care when manoeuvring if you have a rollator or walker on board.
- Ensure that the load is secured properly before moving off.
- Be aware that the load you are carrying may obscure the rear lights on the scooter. If this is the case, please use the foot path whilst carrying the load, particularly at night.

Fig. 4.19

4.12.7 Oxygen Bottle Holder.

Fits to the seat via the armrest bracket bolts. It can be positioned on the left or right hand side of the seat. The holder is designed to accept a 3.9 kg bottle, (Fig.4.20).

⚠ WARNING!

While you are taking Oxygen, observe all safety regulations pertaining to the use of Oxygen.

- Do not enter an area where naked flames may be used.
- Do not smoke.
- Do not use transmitting devises such as mobile phones etc.

Fig. 4.20

5.0 Using the scooter

⚠ DANGER!

- Be aware that you may need to adjust the controller settings of your scooter.

⚠ DANGERS!

Weight limits

- The user, plus options and accessories, plus items carried should never exceed the maximum user weight.
- Never sit in the scooter while weight training if the total weight (user plus additional weighs) exceed the maximum user weight.
- Exceeding the weight limit is likely to damage the seat frame or fasteners and may cause severe injury to you or others from scooter failure.
- Exceeding the weight limit will void the warranty
- Do not hang shopping bags from the handlebars as they could swing and cause loss of steering control or cause inadvertent drive actions.
- Do not overload the front and rear baskets as steering control and stability will be negatively affected.

5.1 Checking scooter before use

Perform the following daily check routine before driving:

⚠ WARNING!

- Ensure all controls are functioning properly.
- If you discover any scooter malfunction, take it to be repaired or reset. Your dealer can help you find the fault and correct it.
- Use extreme care when you drive the scooter in reverse. If one of the wheels hits an obstacle, you could lose control of the scooter and fall off.
- When traveling along, always ensure the backrest is upright and the seat faces forward.
- Never short-circuit electrical connection as you could cause an explosion.
- Do not use the scooter if any of the tires are damaged or under/over inflated.
- When using mobile phones you should switch the scooter off.
- Do no smoke whilst on board the scooter.
- If you take a break from driving, but remain seated on the scooter for more than just a moment; switch the scooter off at the ignition key.

⚠ CAUTION!

Checking wheels & tyres

- Are the tyres sufficiently inflated (Chapter 8.2).

Checking batteries

- Before using your vehicle for the very first time, please charge your batteries for a period of 24 hours.
- Are the batteries sufficiently charged? The green lights on the battery indicator must be on. (Chapter 7.2).
- Do not use the scooter when the battery charge level is low. The scooter may come to a sudden, unexpected stop.

Checking lights and indicators

- Ensure that the lights and indicators are functioning correctly and lens are clean before going outdoors at night.

Checking remote

- With the control system switched off, check that the wigwag is not bent or damaged and that it returns to the centre when you push and release it.

Checking free wheel lever

- Before using the scooter, ensure that the free wheel lever has been set to ‘drive’ (Chapter 5.8).

Checking seating

- Ensure that all the cushions are in place.
- Make sure that the backrest is correctly fitted and adjusted.
- Visually inspect the Scooter to make sure the armrests etc. are correctly positioned and all fasteners are sufficiently tightened.

Checking clothing on potential entrapment

- When operating the scooter, ensure that your clothing does not hamper the Scooter (i.e. too long). Before use, always check if your clothing or accessories do not come into contact with the wheels or and other moving and/or rotating parts in which they could become entangled.

Checking weather conditions

- In winter, batteries have a reduced capacity. During a period of light frost, the capacity is roughly 75% of the normal capacity. At temperatures below -5˚C this will be roughly 50%. This will reduce your range of action.

⚠ WARNING!

Avoid wearing loose cuffs/sleeves when operating the wigwag/ side-throttle as this could cause entanglement.

5.2 Making a transfer

⚠ DANGER! / WARNING!

To prevent a fall:

1. Ensure that the key is turned off during transfers to avoid unintentional movement. If you fail to do so, you may touch the controller and cause your scooter to move when you do not expect it.
2. Stand at the side of the scooter and lift the nearest armrest, (Fig.5.1).
3. Push the seat rotate lever forwards and rotate the seat until it faces you. (Fig. 5.2).
4. Make sure that the seat is locked securely into position.
5. Push the seat rotate lever forwards and rotate the seat until facing forward (Fig.5.3).
6. Pull the seat sliding mechanism lever and slide forward or rearward to find a good seating position.
7. Make sure that the seat is locked securely into position and the armrest is down.
8. Ensure that your feet are placed firmly on the foot board of the scooter
9. Adjust the tiller so you can reach all the controls comfortably, (Fig.5.4).

Fig. 5.1

Fig. 5.2

Fig. 5.3

Fig. 5.4

5.3 Driving the scooter

⚠ WARNING!

- The user of the scooter is at all times completely responsible for complying with the applicable local safety regulations and guidelines.

Scooters are driven by means of the operating levers and the control panel (controller). See chapter 6

Rear view mirror

⚠ WARNING!

- To avoid injury to people around you please be aware that the mirror protrudes outside the space envelope of the scooter and could cause injury to someone when driving past.
- The mirror must be used on models at speeds over 6 kph on roads according to local law.
- Always make sure that when using the mirror that it is clean and unbroken so that it does not impair your visibility.

Road use

Please show the utmost consideration for the other traffic on the road.

⚠ DANGER!

- Remember that the last thing a car or lorry driver expects to see is a scooter backing off the kerb into the road.
- If in any doubt, do not risk crossing the road until you are certain that it is safe.
- Always cross the road as quickly as possible, there may be other traffic.
- Do not drive over anything that could cause punctures in the tyres.
- Ensure that there are no objects in your path that could possibly become lodged in your scooter mechanism or in the spokes of the rear wheels. This could cause the scooter to come to a sudden stop.
- Riding over drains or grids could cause the scooter wheels to become lodged, causing the scooter to come to a sudden stop.
- When using your Scooter on public walkways and footpaths, always be aware of pedestrians and situations which might require extra care.
- When manoeuvring in confined areas, including shops, ensure the minimum speed is selected.
- For the safety of the operator and other pedestrians, Sunrise Medical recommends that whilst driving on footpaths and other pedestrian walkways, the scooter preset speed should be set to less than 4 mph/6kph.

Additional dangers

- Be especially vigilant around young children and pets.
- Remember, when driving in public places drive with caution and regard for others at all times.
- Remember to keep the key with you at all times for your safety and security.

Adverse conditions:

Please be aware that when driving your scooter in adverse conditions, e.g. on wet grass, mud, ice, snow or other slippery surfaces, you may experience a reduction in the grip and traction of your scooter.

⚠ DANGER!

- We recommend you take extra precautions in these conditions, particularly on hills and slopes; your scooter could become unstable or skid causing possible injury.
- When you are using a Scooter, take extra care with loose or long items of clothing. Moving parts, such as wheels, can be potentially dangerous or even fatal if clothing becomes entangled.

NOTE :

Extreme variances in temperature may trigger the self-protect mechanism in the control system. If this occurs the control system will temporarily shut down to prevent damage to the electronics or the scooter.

5.4 Curves

Steering the scooter is easy and logical. Just be sure to remember to get wide clearance when turning so that the rear wheels clear any obstacle.

Shortcutting a pavement corner can cause the back wheel to go off the pavement, causing problems, if the corner is very rough. Avoid this at all times by steering an exaggerated curve around the obstacle.

When steering in a tight spot, such as a doorway or when turning around, stop the scooter and then turn the handlebar to where you want to go, then apply power gently. This will make the scooter turn tightly. It is also recommended that the pre-set speed is set to a slower setting to aid control in tight spots.

⚠ DANGER!

Full speed turns should not be attempted. If you need to turn sharply you must reduce your speed with the wigwag or side throttle or speed setting. This is particularly important when travelling across or down a slope. Disregarding this advice could lead to your scooter tipping over.

Option: Speed steering reduction

Your scooter can be fitted with automatic speed steering reduction (not available in all markets). This function lowers the scooter's speed as soon as you start driving a curve, as a helpful safety device. In certain situations you may wish to deactivate this function, for example if you are in on a slope or manoeuvring indoors and lose too much driving force. To deactivate speed steering reduction press (Fig. 5.5 - A).

⚠ DANGER!

Deactivating this function will lead to a different dynamic driving behavior. Be careful when driving around a corner.

⚠ WARNING!

Use indicators when changing direction.

5.5 Braking & Emergency stop

There are three ways to stop your scooter:

- Simplest and safest way to stop the scooter is to release the operating lever. This will bring the scooter to a halt in a controlled manner.
- Going in reverse will break the scooter abruptly with a fast stop.
- Switching the control system off using the ON/OFF key switch whilst the scooter is in motion will also bring the scooter to a halt.

⚠ WARNING!

- Switching the control system off is only to be used in an emergency as the stopping action is very abrupt.

5.6 Driving on a slope (Fig 5.6)

Your scooter has been designed and tested to allow its use on slopes or gradients of at least 6°.

For Elite² Mini with 90 amp controller	6° rated slope or gradient
For Elite² XS & Elite² Plus with 140 amp controller. Elite² Mini with 120 amp controller.	6° rated slope or gradient

⚠ DANGER!

- Stopping distances on slopes can be significantly longer than on level ground.

⚠ DANGER!

- In certain circumstances, your scooter could become unstable.
- To improve stability lean forward when driving uphill, with the seat and back in an upright position.
- Alternatively, sit in an upright position when travelling in a forward, downhill direction or and/or recline the seat backwards.
- If you are in any doubt about the capabilities of your scooter on a slope then do not attempt to drive up or down the slope/kerb; try to find an alternative route.

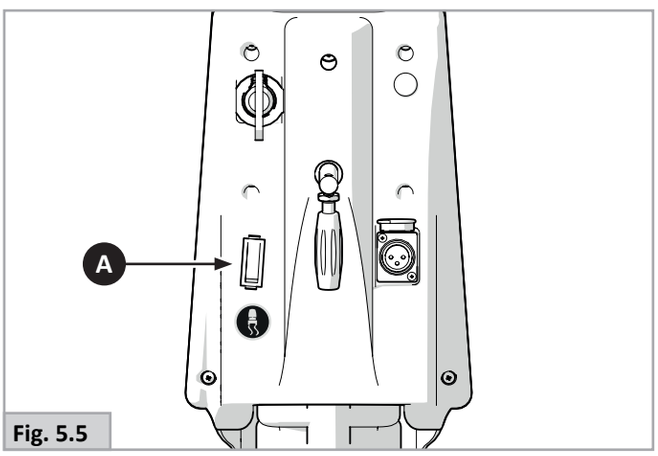


Fig. 5.5

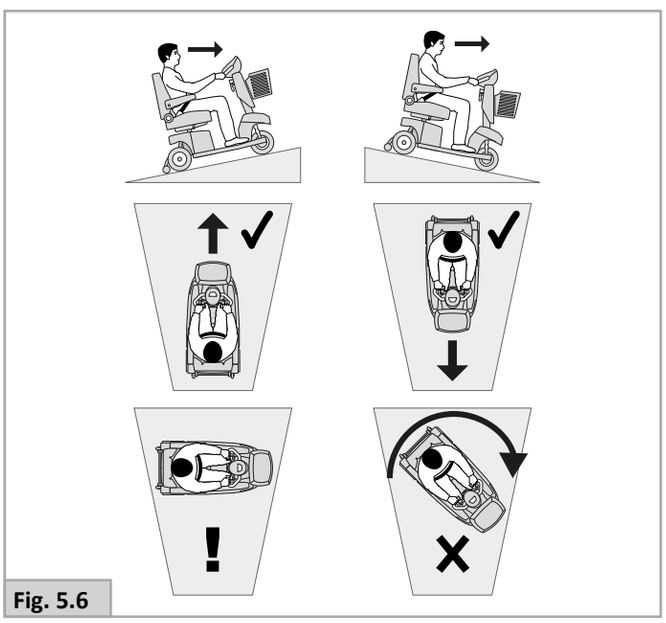


Fig. 5.6

Gradients: ascents:

⚠ **WARNING!**

- When going uphill, keep the scooter moving.
- If you have stopped on a hill, you should start slowly.
- If necessary lean forward.

Gradients: descents:

On descents, it is important not to let the scooter accelerate beyond its normal level of ground speed.

⚠ **DANGER!**

- Proceed slowly down steep descents, (below the speed of 5kph) and stop if you fell anxious.
  - It is safer to proceed slowly down steep descents (below the speed of 3mph, 5kph) and stop, if any anxiety arises regarding the descent.
  - If the scooter picks up speed, release the control lever to stop all forward movement, then restart slowly and do not allow the speed to increase beyond a comfortable level.

5.7 Obstacles & kerbs:

⚠ **DANGER!**

- Never descend a kerb backwards.
- Do not attempt to climb or descend a series of steps or use on escalators. It is unsafe to do so and could cause personal injury or damage the scooter. This scooter has only been designed to climb a single step or kerb.

Kerb climbing:

Always approach a kerb at 90° (Fig. 5.7).

- Approach the kerb or step, head on at a 90° angle.
- Drive forwards slowly and steadily.
- Stop the scooter as soon as the front wheel touch the kerb.
- Apply sufficient power to the motors to lift the front of the scooter up onto the kerb or step and then apply slightly more power until the drive wheels climb the kerb or step smoothly.
- As far as possible, keep the steering wheel in the straight forward position.

The approach speed and process can vary depending on your scooter drive type and castor wheel choice.

Dismounting the kerb.

⚠ **DANGER!**

Move the scooter slowly and carefully in a forward direction until the front wheel is on the edge of the kerb, again in a 90° position to the kerb.
Drive as slowly as possible off the kerb with the drive wheels. Do not stop the scooter during decent of the kerb. You will feel more secure if you can lean backwards, but if you can't, don't worry, the scooter is stable. As long as you stay within its limitation, you will be quite safe.
We recommend using the lap strap to feel more secure during declining the kerb.

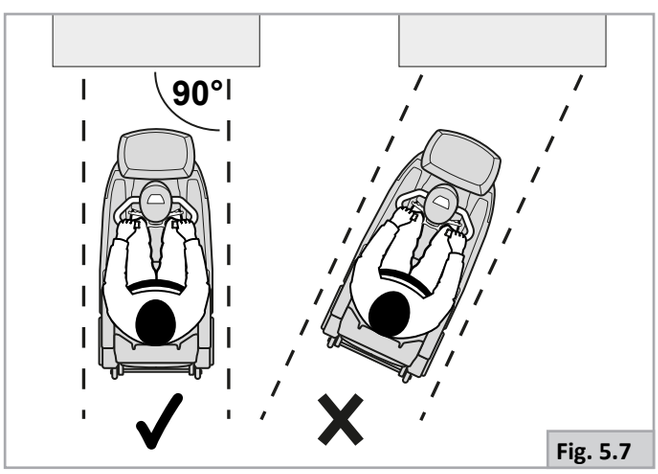


Fig. 5.7

5.8 Pushing the scooter

The scooter can be moved by pushing. In order to do so, the motors must be disengaged using a freewheel lever. This feature was developed for the attendants of scooter users and also functions as an emergency freewheel lever.
The freewheel lever has 2 positions:

DRIVE (A - Fig. 5.8)
All movement, including braking, is exclusively controlled by operation of the electronic control system.

FREEWHEEL (B - Fig. 5.8)
Movement is by manual means. Movement can also occur due to gravity, (potholes, kerbs, hills or inclines etc). Push the lever up for drive and down for freewheel.

⚠ DANGER!

- The free wheel lever should only be operated by the attendant and never by the user.
- A user may never be left unattended while the scooter is in 'push' (B - Fig. 5.8).
- Never set the lever to the 'push' position on a slope! When the freewheel lever is set to 'push', the automatic parking brake is deactivated. This makes it possible for the scooter to roll down the slope.
- The automatic parking brake only works is the lever is set to 'drive' position.
- When the scooter is no longer being pushed, the freewheel lever should be set to 'drive' immediately.
- To manually push the scooter you must release the motor brake.
- Do not engage or disengage the motor brake unless power to the scooter is off.
- Make sure you have full control over the scooter when you release the motor brake. When you do so the scooter will have no braking capability.
- Make sure the scooter is on level ground before you release the motor brake.
- Propel this scooter by the steering wheel and seat back only. They provide secure points for you to hold the rear of the scooter to prevent a fall or tip-over.
- Check to make sure push handle grips will not rotate or slip off.

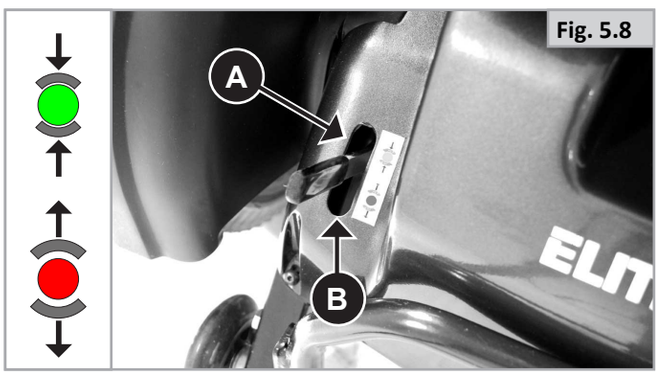


Fig. 5.8

5.9 Using Near Water

Take extra care when using your scooter near open water. Canal tow paths, beaches, quay sides and river banks can be hazardous.

⚠ DANGER!

- Do not travel along a sloping surface leading to an open waters edge.
- Keep a distance of at least one scooter length from an open waters edge whenever possible.
- Beware of hidden obstacles such as tree roots drain covers and mooring rings as these may cause loss of control if you hit them unexpectedly.
- Use a low speed setting.
- Never reverse towards open water.
- Do not drive up or down steep slopes located near an open waters edge.
- Give way to pedestrians on canal tow paths and footpaths.
- Sound the horn to let other people know you are there.
- Never try to manoeuvre around pedestrians if it takes you too close to the waters edge.
- Avoid deep sand, gravel, mud and wet grassy slopes.
- Take extra care on windy days as loose clothing such as capes or blankets can suddenly fly up and may foul the controls or temporarily block you view.
- Do not get close to open water during a storm.
- When stationary, switch the scooter OFF at the key.
- Observe all local by laws, rules and regulations.

⚠ CAUTION!

- Always clean your scooter thoroughly if it has been exposed to mud, sand, salt or other contaminates.
- Do not use a high pressure washer, (see section 9.6).

6.0 Control Panel

Fig. 6.1

A. LCD display
B. Directional arrow
C. Battery level gauge
D. Speed control
E. Lights
F. Indicators
G. Hazard lights
H. Horn
I. Control levers
J. Mode button

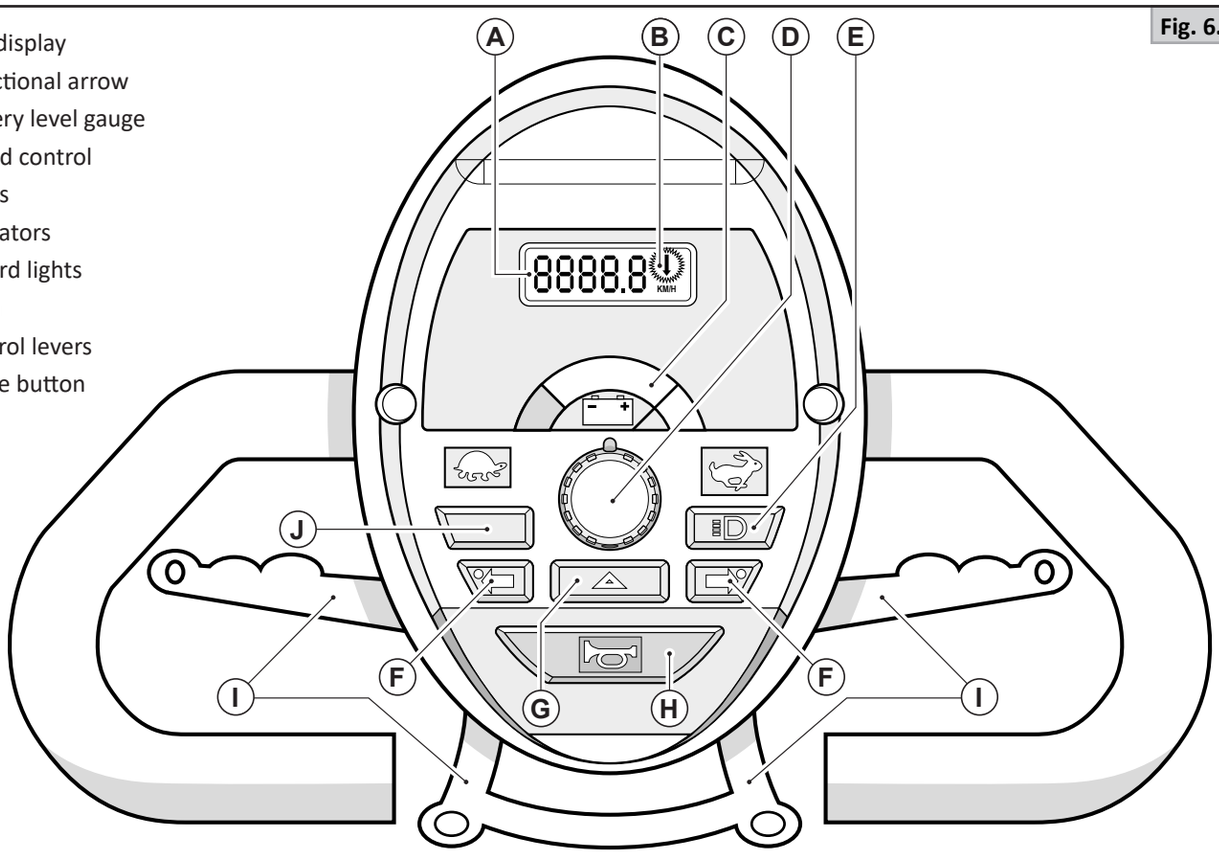
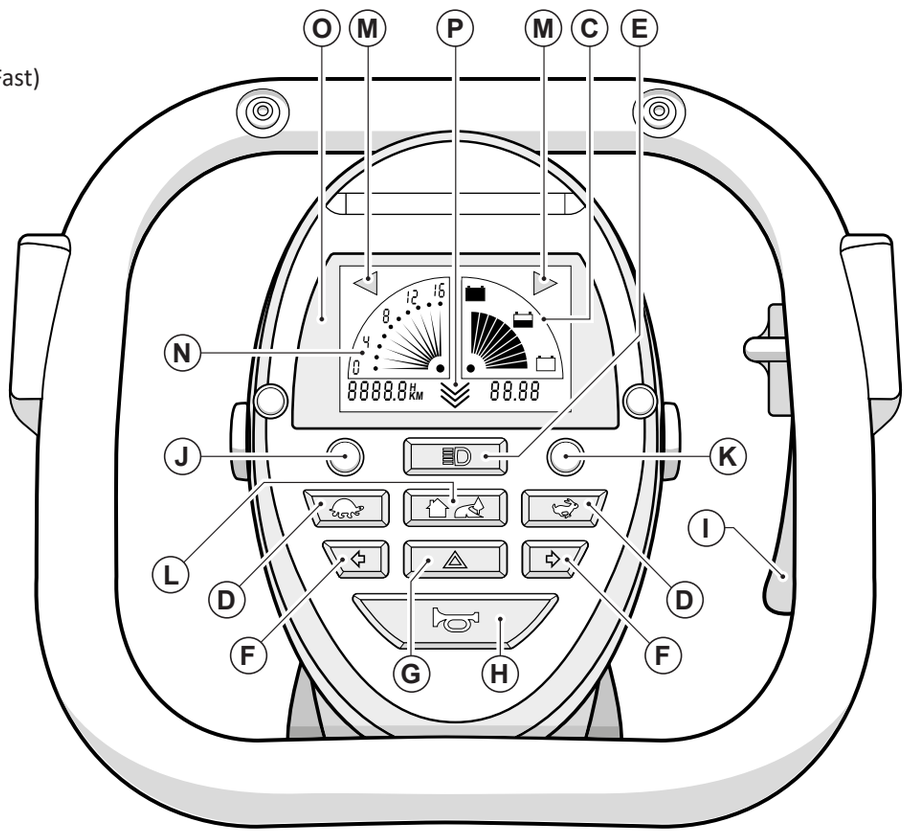
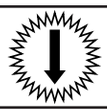
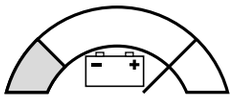
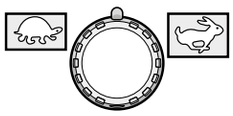
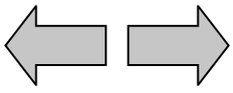
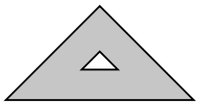
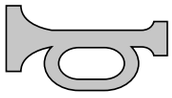
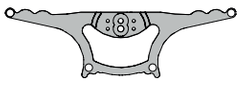


Fig. 6.2

C. Battery level gauge
D. Speed control (Slow/Fast)
E. Lights
F. Indicators
G. Hazard lights
H. Horn
I. Control levers
J. Mode button
K. Time/Temp Button
L. Profile Button (Indoor/Outdoor)
M. Indicator Icons
N. Speed display icon
O. LCD Display
P. Directional Arrows



6.1 Definitions

	**A. LCD Display** The backlit LCD display can display: • Speed in Kilometres per hour (km/h) or Miles per hour (m/h). • Total distance in Kilometres (km) or Miles (m), • Trip distance – reset by holding down MODE button, 7.1.7, (Fig.7.1). • Total Hours the scooter has been used (h). • Fault display – see troubleshooting section.
	**B. Directional Arrow** When used with an optional foot or twist grip hand control the flashing arrow indicates travel in reverse direction, (Fig 7.1-Label 7.1.10A), (also see section 7.13).
	**C. Battery gauge** This indicates the average amount of charge you have in the batteries. Please be aware that the meter reading may fluctuate when the scooter is in use, this is normal. Fig 6.1: Green indicates fully charged batteries with reducing charge to the red indicator. Red indicates warning and less than half-charged batteries. Fig 6.2: 10 bars indicates fully charged batteries this is shown by the full battery symbol. 50% charge is approximately 5 bars. The battery gauge will flash when the batteries are in a very low state of charge. It is recommend that, if possible, you charge the scooter when the gauge displays 2 bars.
	**D. Speed control** This allows you to preset your desired scooter speed. Turn the dial anti-clockwise to slow for very gentle operation. Turn it clockwise to increase your speed to maximum Remember that only with practice will you become a competent driver. Find a safe, hazard free environment to practice controlling the scooter and familiarise yourself with the controls and functions.
	**E. Lights** Pressing the button will turn on the front LED headlight, and the rear LED lights **NOTE:** If the lights are inadvertently left on after use, removing the ON/OFF key will extinguish the lights automatically.
	**F. Indicators** Pressing the button will illuminate the front and rear LED indicators in a flashing pattern indicating you are turning the scooter. On the keypad the visual indicator light will also flash, and the scooter will emit a beeping tone. To turn off the indicators press the button again. Alternatively, the direction indicators will automatically turn off after a distance of approximately 30 meters.
	**G. Hazard lights** With the scooter ON the front and rear LED indicators will flash simultaneously when this button is pressed. The visual indicators on the direction buttons on the keypads will also illuminate. Press the button again to switch the hazard lights off.
	**H. Horn** The horn will sound while this button is depressed.
	**I. Control levers** (See 6.1.2).
	**J. Mode button** Pressing the Mode button will change the information shown in the LCD display 7.1.10 • Pressing and HOLDING the Mode button will reset the trip distance displayed. • Press once to show total distance travelled. • Press twice to show total trip distance travelled (LCD will display a “t”). • Press a third time to show total hours of use. • Press fourth time to return to speed display.
	**K. Time/Temp Button** Each press of this button will change the display to show either the time or the current ambient temperature. **NOTE:** The ambient temperature display is an indication only of current ambient temperature. Due to the numerous factors that affect temperature sensing, the displayed temperature should only be taken as a guide.

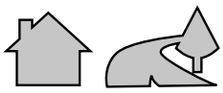
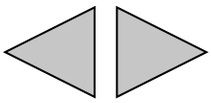
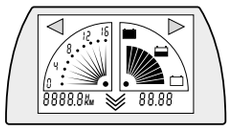
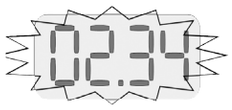
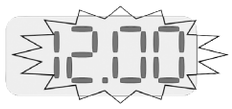
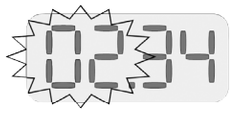
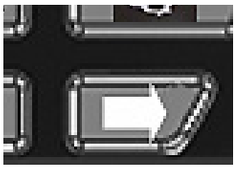
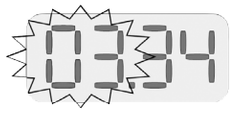
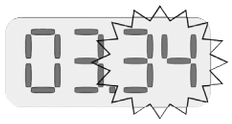
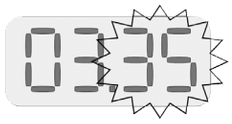
	**L. Profile Button (Indoor/Outdoor)** The user profile button, (indoor/outdoor mode), changes the speed of the scooter to a preset 50% of maximum speed and reduces the acceleration and deceleration. This is ideal when travelling indoor or within confined spaces. When the indoor mode is activated:- The LCD display will show the graphic in Fig. 6.2 To return to normal driving, (outdoor mode), press the button again, (Fig.6.2 - L). When the indoor mode is active, the scooter speed can also be reduced further by using the Turtle button as normal. The scooter will remember this speed when changing from indoor/outdoor mode until the scooter is turned off. After this, the setting will revert to the standard 50% setting. NOTE: Further adjustment of the standard indoor setting is possible. Contact your Sunrise Medical dealer or supplier to do this.
	**M. Indicator Icons** The triangular shaped icon will pulse in time with the indicators and hazard lights.
	**N. speed display icon** (Fig.6.2 - N) The straight line indicates the current running speed and will rise and fall accordingly. The small dots represent the preset speed setting, (Fig. 6.2 - N).
	**O. LCD Display** (Fig.6.2 - O) The backlit LCD display can display the following functions: - Battery gauge. - Time and ambient temperature. - Speed in Kilometres per hour (km/h) or Miles per hour (m/h), - Total distance in Kilometres (km) or Miles (m), - Trip distance. This can be reset by holding down the MODE button. - Total Hours the scooter has been in use (h). - Directional Arrows. When used with an optional foot or twist grip hand control the arrow indicates travel in reverse direction, (see section 7.13). - Fault display, (see troubleshooting section).
	**P. Directional arrows** (Fig.6.2) When used with an optional foot or twist grip hand control the arrow indicates the direction of travel.

Fig. 6.3

MODE	OPERATION		DISPLAY	
To enter Clock Set Mode	Press and hold the round button below the clock display for more than 10 seconds.		The current time display flashes.	
Choosing the 12 or 24 Hour Clock Mode	Press and release the right-hand indicator button to switch between 12 or 24 hour clock display.		12:hr Flashes or 24:hr Flashes.	
	Press and release the round button to confirm your selection and move to the next step.		The hours part of the time display flashes.	
Setting the Hours	Press and release the right-hand indicator button once to move up One Hour at a time.		The Hour display is changed by 1 hour per press and release.	
	Press and release the round button to confirm the hours setting and move to the next step.		The minutes part of the time display flashes.	
Setting the Minutes	Press and release the right-hand indicator button once to move up One Minute at a time.		The Minutes display is changed by 1 minute per press and release.	
To Finish	Press and release the round button to confirm the minutes setting. This will automatically save your settings and exit the Clock Set Mode.		The clock shows your new time setting.	

⚠ WARNING!

Ensure that the lights and indicators are functioning correctly and all of the lenses are clean, before using the scooter at night or during poor visibility.

⚠ WARNING!

For the safety of the operator and other pedestrians, Sunrise Medical recommends that whilst driving on footpaths and other pedestrian walkways, the scooter preset speed should be set to less than 4 mph/6kph.

6.1.1 On/Off Key Switch

To turn ON, insert the key vertically and turn 90 degree clockwise.
To turn OFF, turn the key back to vertical position and remove, (Fig.6.4).

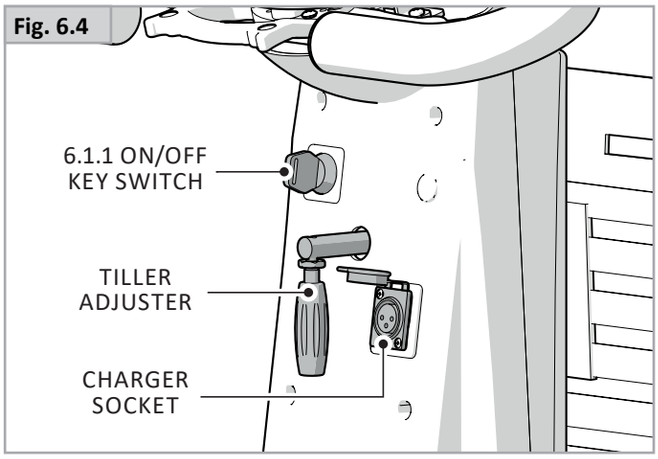
⚠ WARNING!

Do not use the on/off key switch to stop the scooter unless there is an emergency. (If you do you may shorten the life of the scooter drive components).

To avoid unexpected or unintentional movement of the scooter and to conserve battery power, it is recommended that the key switch is switched off when stationary or not being used.

Make sure no other keys / key ring are attached to the scooter's key ring while driving. This way you will avoid that that the scooter is accidentally switched off and comes to a standstill.

Fig. 6.4



6.1.2 Control Lever (Wig wag Control) (Fig. 6.5)

Driving forward

1. Switch on the scooter, see Fig. 6.4.
2. Use the speed control (A in Fig. 6.5 or Fig. 6.6) to select the desired speed.
3. Squeeze the wigwag lever (B in Fig. 6.5) on the right hand side. The further you squeeze the handle, the faster you will drive. As an alternative, you can also use the thumb control (C) on the left hand side.
   Pulling the control lever up (B in Fig. 6.6) or pushing back the upper knob (C) will drive the scooter forward.
   The more you squeeze the lever the faster you will go.

Fig. 6.5

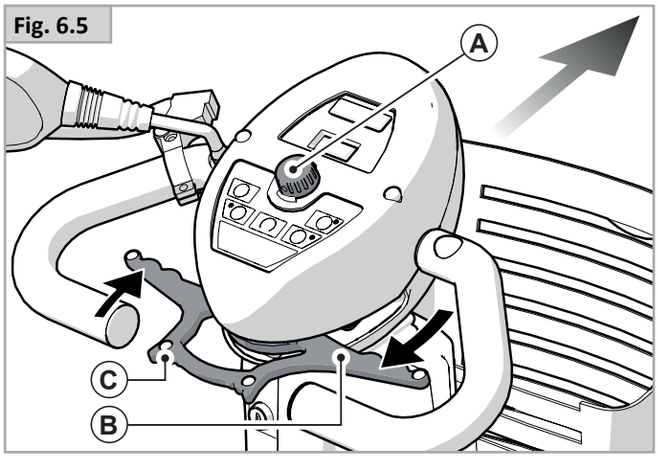
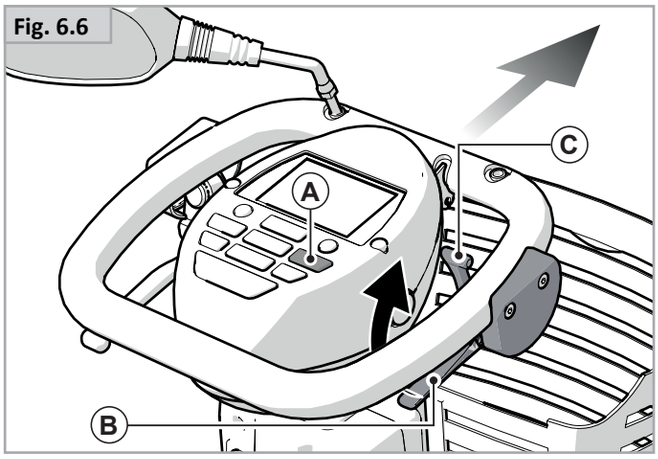


Fig. 6.6



Reversing

1. Release the operating handle. The scooter will come to a standstill.

   Fig 6.7: Slowly squeeze the wigwag lever (D) on the left hand side.

   The scooter will drive in reverse. The further you squeeze the handle, the faster you will drive. As an alternative, you can also use the thumb control (E) on right hand side.

   Fig 6.8: Pushing down on the control lever (F) or pulling back on the upper knob (G) will reverse the scooter.

2. Slowly squeeze the wigwag lever (D) on the left hand side. The scooter will drive in reverse. The further you squeeze the handle, the faster you will drive. As an alternative, you can also use the thumb control (E) on right hand side.
3. When you release the operating handle, you will brake automatically.

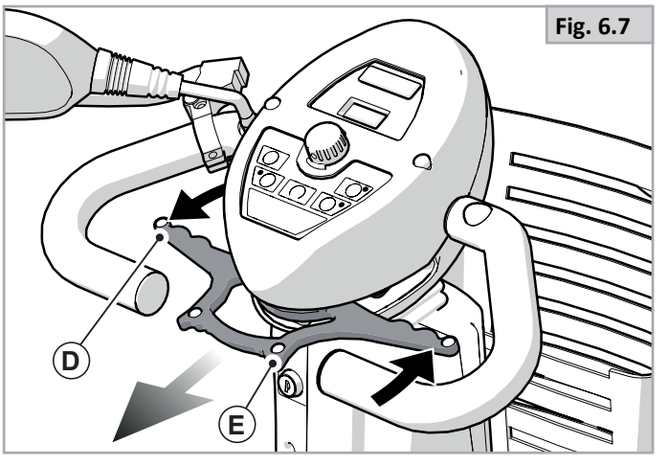


Fig. 6.7

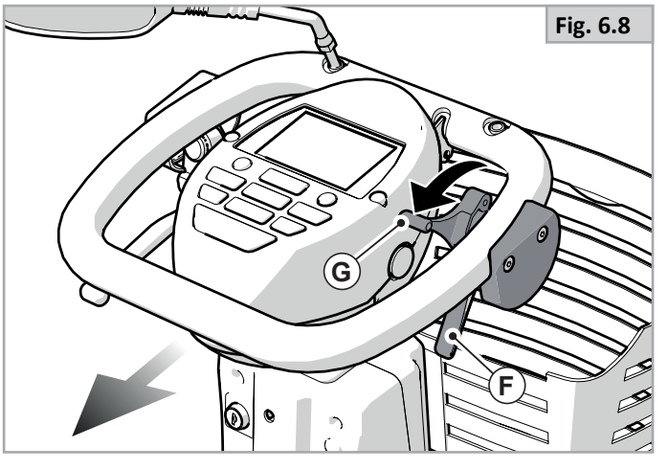


Fig. 6.8

⚠ WARNING!

The factory default setting is described above. Be aware that it is possible the throttle operation could be reversed through programming, particularly if you are a second user.

When reversing an audible alarm can be programmed to come on to warn other vehicles or pedestrians that the scooter is reversing.

NOTE: The audible reversing alarm is turned off by default but it can be activated by your Sunrise Medical dealer or supplier. It is not recommended to deactivate this feature if it is a statutory requirement of your country/state.

NOTE: Forward and reverse functions can be swapped over from right hand operation to left hand operation, via programming. Please consult your authorised Sunrise dealer.

⚠ WARNING!

It is important that you stop the scooter before you change direction from forward to reverse.
Always turn the scooter control system off via the keyswitch before you transfer in or out of the scooter.

⚠ DANGER!

Reversing requires extra attention as the field of vision is restricted.

It is advisable that during the first few sessions of operating your scooter that the area around you is clear of obstacles and pedestrians.

6.2 Braking

To stop the Scooter simply release the Wig-Wag or side control lever, whilst keeping your hands on the handlebar. Two types of braking will automatically operate in sequence:

- Automatic regenerative braking, which slows the Scooter to a standstill.
- Automatic parking brake which will operate as the scooter comes to a stop. The automatic parking break holds the Scooter in position, even if you are on a hill.

NOTE: This is a two-stage process and is not instantaneous. First the scooter slows down and stops, then the parking brake comes on. When starting off again the parking brake will release automatically. If the throttle is momentarily engaged and released, the parking break will release and then engage again in approximately 1/2 a wheel turn.

When stopping the high visibility rear LED braking lights will illuminate. These also function when the scooter lights are turned on.

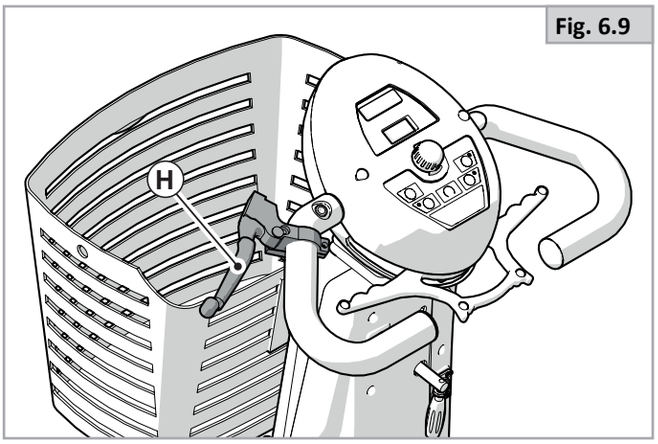


Fig. 6.9

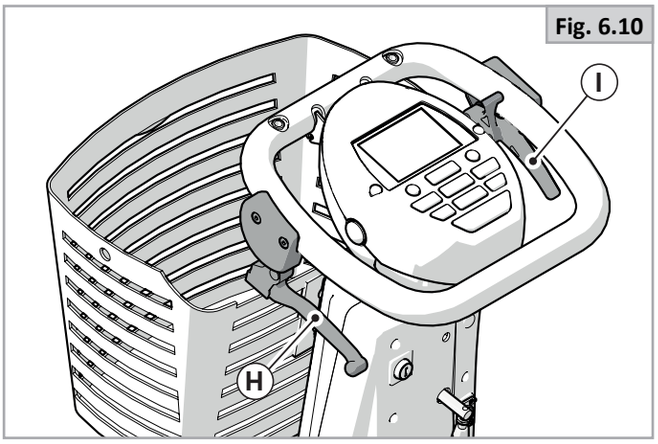


Fig. 6.10

6.2.1 Emergency Braking using the Hand brake

In the unlikely event of an unwanted movement of the Scooter, use the Parking Braking System (PBS) hand brake. The Parking Braking System (PBS) is operated by pulling the hand brake lever on the tiller, this will slow the scooter to a controlled stop.

Handlebar mount, (H - Fig. 6.9 & Fig. 6.10)

Side lever mount, (I - Fig. 6.10)

The hand brake automatically stops the drive unit by way of an electrical connection. Releasing the hand brake lever will allow the drive unit to function again.

NOTE: The scooter will not drive with the handbrake applied.

6.2.2 Emergency Braking using the keyswitch

In the unlikely event of an unwanted movement of the Scooter, turning the keyswitch OFF will cause the scooter to a come to an immediate stop. Though very effective, emergency braking is extremely abrupt and must never be used in normal use.

6.3 Throttle select switch

This switch is used to select between the foot control and any handlebar control.
NOTE: A latching, (push On-push Off), type switch is used for this function, (Fig.6.11).

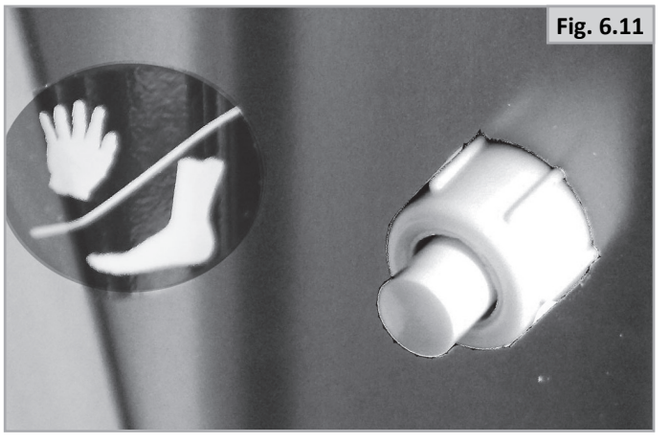


Fig. 6.11

⚠ WARNING!
When the scooter is turned off, the control that was selected at the time of switching off will still be selected when the scooter is turned back on again.
Use caution when first starting off after a break in driving.
Keep any luggage/bags, clear of fouling the foot control at all times.

6.4 Directional switch

This switch is used to select between the forward or reverse direction of travel, (Fig.6.12).
The directional switch is always used with any non-wigwag throttle, i.e. foot control and twist grip throttle.
When reverse is selected a warning flashing arrow appears on the LCD display of the Elite² XS -RS, (Fig.6.13 - A), or scrolling arrows appear on the LCD display of the Elite² Plus, (Fig.6.14 - B).

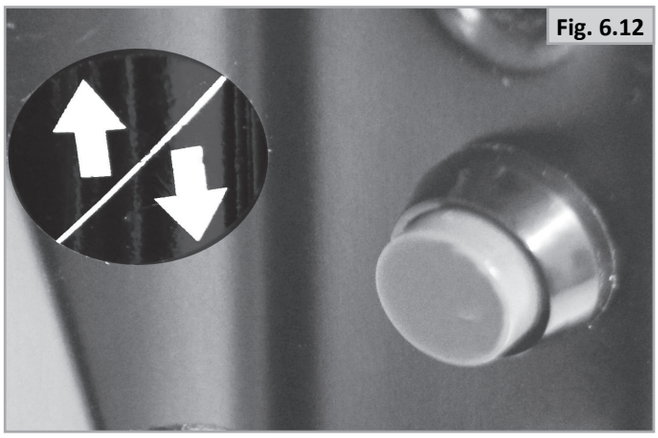


Fig. 6.12

⚠ WARNING!
- When the scooter is turned off, the direction that was selected at the time of switching off will still be selected when the scooter is turned back on again.
- Use caution when first starting off after a break in driving.
- Use caution when reversing.
- Always stop the scooter before switching between forwards and reverse.
- Do not reverse downhill on an uneven surface.
- Do not reverse and turn on any uneven surface.
- Never reverse around a blind corner.
- Always give way to people on foot.

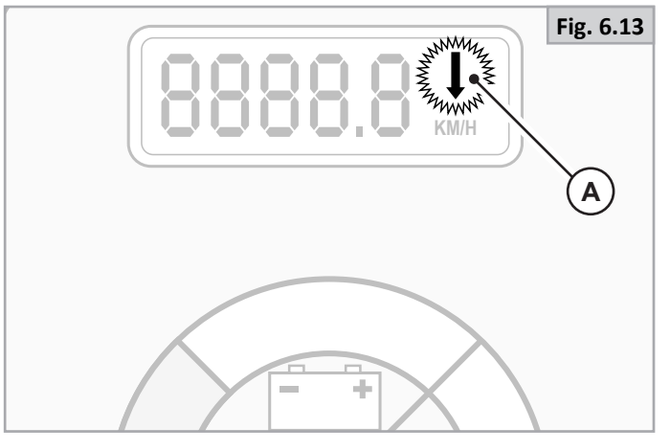


Fig. 6.13

If your head/neck movement is restricted when reversing:
- Use your mirrors.
- Select the lowest usable speed setting.
- Do not make any sudden manoeuvres.
- Listen out for any audible clues, (children shouting, running etc).
- Be prepared to stop immediately.

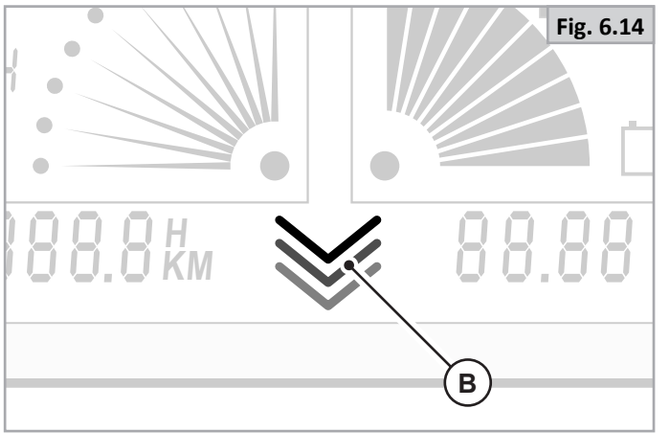


Fig. 6.14

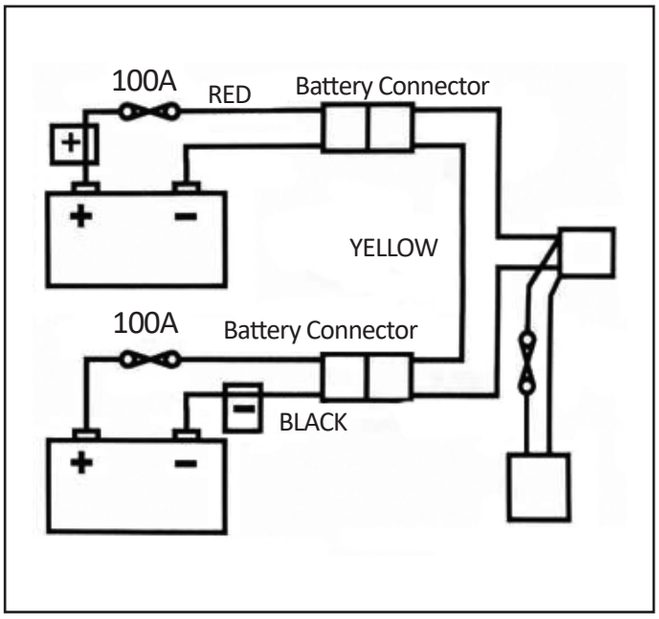
7.0 Batteries, charging and range

7.1 Batteries

Batteries are the power source for almost all of the modern mobility products available today. The design of batteries used in mobility products is significantly different to the batteries used to start a car for example. Car batteries are designed to release a large amount of power over a short period of time, whilst mobility batteries (commonly called deep cycle batteries) release their power evenly, over a long period of time. Therefore, due to the lower production volumes and increased technological requirements, mobility batteries are typically more expensive.
Commonly two 12 volt batteries are used together in a mobility product, giving a total voltage of 24 volts. The size of the battery (e.g. its available power) is expressed in amps per hour e.g. 70amp/hr. The higher the number, the bigger the battery size, weight and, potentially, the greater the distance you can travel. Sunrise Medical only fit as standard maintenance free batteries into these types of scooters.
This type of battery uses a method of carrying the electrolyte commonly referred to as 'AGM', that is held within the battery case. As the name implies, no maintenance is required other than regular charging. You can safely transport this type of battery without fear of acid spilling. **Furthermore, they are approved for transportation on aircraft, trains and ships.**

⚠ CAUTION!

- Do not fit car batteries to the scooter. Fit only deep cycle, maintenance free mobility batteries.
- When the batteries are worn out, take them to the local authority disposal point.
- Return the batteries back to Sunrise Medical or directly to the battery manufacturer for recycling, when they no longer hold charge.
- The battery terminals need to be checked regularly for signs of corrosion. If any corrosion is apparent, then clean the terminals completely and re-grease the terminal using Vaseline petroleum jelly, not ordinary grease. Ensure that the terminal nut and bolt, cable clip and exposed cable are completely covered with jelly.



⚠ DANGER!

- Do not expose any part of the battery to direct heat (i.e. naked flame, gas fire).
- Be extra cautious to reduce the risk of dropping a metal tool onto the battery. It could spark or short-circuit the battery or other electrical parts that may cause an explosion. Also take off all personal metal effects and dangling objects when working on the battery.
- Do not, under any circumstances, tamper with the batteries. If in any doubt, contact your local Sunrise Medical authorised dealer.
- Avoid contact with acid on damaged sealed type batteries or wet batteries.
- Battery acid can cause burns to the skin as well as damage to floors, furniture and your scooter.
- If battery acid comes into contact with the skin or clothing, wash immediately with soap and water.
- If battery acid comes into contact with the eye, immediately flood the eye with running cold water for at least 10 minutes and seek medical attention immediately.
- Acid spills can be neutralised with baking soda and water.
- Take care to keep batteries upright at all times, especially when transporting your scooter.

Safety cut-outs
In the event of a short-circuit there are several safety systems built into your scooter to safeguard your electrical circuits, (Fig. 6.1).

1. Fusible 100A links are connected into the battery harnesses to protect the batteries and wiring.
2. 15A auxiliary power circuit fuses for auxiliary modules and seating power supply.

To replace them contact your Sunrise Medical authorised dealer, who will also diagnose the original fault.

7.2 Charging batteries:

🕮 Battery charger: Please read the owner's manual with the charger supplied carefully. The general procedures and effects for the interference with the scooter and the batteries remain valid.


Fig. 7.1

Battery care plan

Below is set out a battery care plan for maintenance free batteries. This has been agreed between Sunrise Medical and the battery manufacturers, to enable you to get the best out of your batteries. If a different care plan is followed, this may result in lower than expected performance from your mobility vehicle.

- Only use an approved Sunrise Medical charger compatible with the vehicle to be charged.
- Charge your batteries every night, regardless of the amount of use your mobility device has had during the day.
- Charge the batteries in a well-ventilated area.
- Do not interrupt the charging cycle.
- If your mobility device is not required for use, it should remain connected to the charger until required. This will not damage your batteries, as long as the mains socket/plug is left switched on. Turning the mains socket/plug off, but leaving the mains cable plugged in will eventually deplete your battery charge.
- If you leave your vehicle for an extended period (more than 15 days), charge the batteries fully and then disconnect the main battery lead.
- Failure to allow for recharge will damage the batteries and can lead to shortened distances and premature failure.
- Do not top up the charge of your batteries during the day. Wait until the evening for a full overnight charge.
- As a general rule, maintenance free batteries take longer to fully charge than "wet" lead acid batteries.
- The battery terminals need to be checked regularly for signs of corrosion. If any corrosion is apparent, then clean the terminals completely and re-grease the terminal using Vaseline petroleum jelly, not ordinary grease. Ensure that the terminal nut and bolt, cable clip and exposed cable are completely covered with jelly.
- Following all the points above should result in a healthier battery, greater range for the vehicle user and a longer life for your batteries.

7.2.1 Charging Socket: (Fig. 7.1)

⚠ **WARNING!**

- The charging socket should only be used for connecting the scooter battery charger plug to the scooter.
- The charging socket should not be used to supply power for any other device.
- Connection of unapproved electrical devices may damage the control system or compromise the EMC performance of the scooter.
- Always put the socket cover back over the charging socket when the battery charger plug has been removed.

Connecting the battery charger

Procedure for connecting the charger and charging
- Switch off the Scooter (see 6.1.1)
- Connect the battery charger round output plug to the charging socket (see Fig. 7.1).
- Connect the charger to the mains supply by means of the mains plug and switch on.

For more information about the charger operation, consult the instructions provided with the charger. 🕮 BATTERY CHARGER. Depending on how depleted the batteries are, it may take up to 12 hours to fully charge the batteries again.

⚠ DANGER!
- Make sure the cord is located so that it will not be stepped on, tripped over or otherwise subjected to damage or stress.
- Do not rest a battery on top of the charger.
- Do not stand the charger on a carpet or other soft surface. Always place it on a hard flat surface.
- Do not operate the charger if it has received a sharp blow, been dropped or otherwise damaged in any way. Take it to a qualified technician.
- Never place the charger directly above the battery being charged; gases from the battery will corrode and damage the charger.
- Never charge a frozen battery. A fully charged battery will rarely freeze but the electrolyte of a discharged battery can freeze at -9° Centigrade. Any battery that is suspected of being frozen should be thawed completely before charging.
- Never sit with the charger on your lap when charging your batteries
- The charger casing will get hot during its normal operation.
- Do not disassemble charger; only have it repaired by the manufacturers. Incorrect re-assembly may result in a risk of electric shock or fire.
- To reduce the risk of an electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning. Turning off the controls will not reduce the risk.
- Never smoke or allow a spark or flame in the vicinity of battery or charger.
- You should not charge your batteries in outdoor conditions.
- It is advised to use a smoke detector in the charging area.

Battery Charger

The external charger has been designed to charge two 12V AGM batteries connected in series (= 24 V).

The chargers have features which prevent hazards or accidents occurring as a result of connecting batteries the wrong way round, overheating caused by fault conditions or attempting to charge wrong voltage batteries.
The majority of charger sizes are electrically double insulated and no earth connection is required. Some larger sizes may be electrically earthed and this will be clearly stated on the label.

If your charger has been specified for use in Continental Europe it will contain a European two pin plug which does not have a fuse. In this case, the fuse is located in the fascia panel of the charger.

Country specific information: UK

The 3-pin UK mains input plug contains a replaceable fuse. The rating of this fuse is shown on the charger label.

⚠ DANGER!
- As with all mains powered electrical equipment, always replace blown fuses with the same type and size of fuse as specified.
- Fitting of different fuses can result in an increased fire risk, damage to the charger or failure of the charger to operate properly.

7.3 The range of your vehicle:

Please refer to the specification tables at the back of this manual for Energy Consumption, (Maximum Range), information.

Most manufacturers of mobility products state the range of their vehicles either in the sales literature or within the Owner's Manual. The range stated sometimes differs from manufacturer to manufacturer even though the battery size is the same. Sunrise Medical measure the range of their vehicles in a consistent and uniform manner, but variances still occur due to motor efficiencies and overall product load weight.

The range figures are calculated to I.S.O. Standard 7176. Part 4: Wheelchair Energy Consumption Theoretical Range.

This test is carried out in controlled conditions with new, fully charged batteries, on a level test surface and a user weight of 100 kg. The range figures stated should be seen as a theoretical maximum and could be reduced if any single, or combination, of the following circumstances occur:

- User weight heavier than 100 kg.
- Batteries whose age and condition are less than perfect.
- The terrain is difficult e.g. very hilly, sloping, muddy ground, gravel, grass, snow and ice.
- The vehicle climbs kerbs regularly.
- The ambient temperature is very hot or very cold.
- Incorrect tyre pressures in one or more tyres.
- Lots of start/stop driving.
- Also thick pile carpets within the home can affect range.
- Use of additional power consumption options (e.g. light, actuators, etc.)

The battery sizes available on each Sunrise Medical product should give sufficient range to cope with the majority of customer's lifestyles.

7.4 Battery warranty:

Battery warranties are subject to periods set by the manufacturers. However, most of these warranties are subject to a wear and tear clause, and if you genuinely wear out your batteries in 6 months, it will not be possible to obtain a replacement under warranty.

7.5 Battery Removal:

Replacing and servicing batteries is to be done by qualified specialist.

In case of malfunctioning batteries, contact your local dealer.

⚠ **DANGER!**
Do not attempt to replace or service batteries without the supervision of trained and qualified personnel.

1. Remove the seat (Fig 7.2 - 7.3)
2. Remove the Battery cover by lifting the small elastic strap off the holding peg and lifting it off (Fig 7.4)
3. Pull the two halves of the plastic battery connector plugs apart, (Fig 7.5).
4. Remove the battery retaining bar by pulling out one clip and sliding the bar through the hole (Fig 7.6).
   NOTE: There are two holes used for this bar, so note which position is being used and refit the bar accordingly.
5. If replacing the batteries or battery looms, pull back the rubber terminal cover and disconnect battery terminals, using a 11.0mm spanner (Fig 7.7). Replace the plastic protective terminal covers when reinstalling the batteries.
6. Bend knees with battery positioned centrally in front of you, rest your forearms on your knees for support.
7. Grab battery handle with both hands.
8. Lift vertically by straightening legs, keeping back posture upright.
9. Move the battery to a safe place, keeping back posture upright and bending knees when setting it down.

NOTE: If changing the batteries for a different size replacement, it may be necessary to adjust the height of the battery retaining bar to suit the new batteries. It may also be necessary to fit the sticky backed foam battery box packer strip to prevent any sideways play. Simply cut the strip to the desired length. If greater depth is required, stick one strip on top of the other.

7.6 Disconnecting batteries for air transport.

The batteries are contained within the drive unit located under the battery shroud (refer to Figs. 7.4 and 7.5).

Fig. 7.2

Fig. 7.3

Fig. 7.4

Fig. 7.5

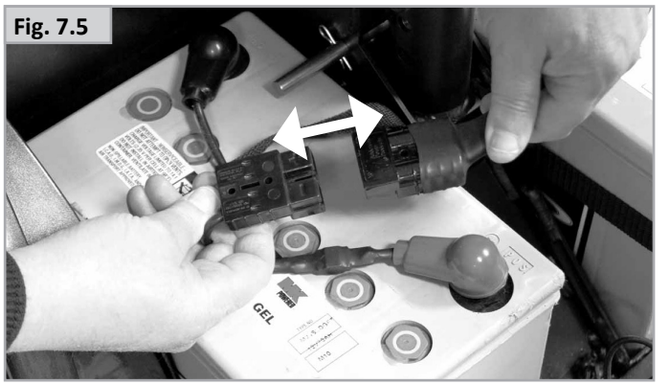


Fig. 7.6

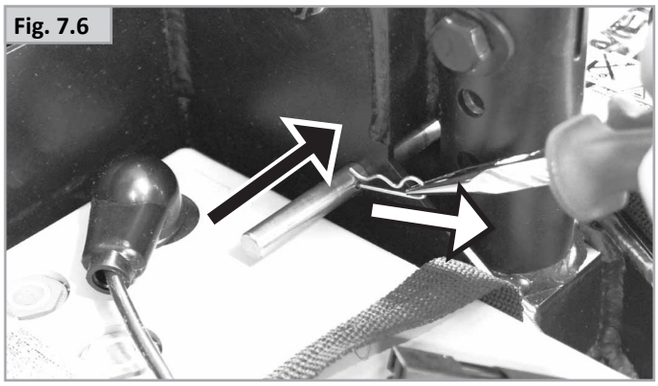


Fig. 7.7

8.0 Transport

8.1 Transportation in vehicles:

This scooter is not suitable to use as a seat in a vehicle.

Not crash tested

⚠ DANGER!

A scooter secured in a vehicle will not provide the equivalent level of safety and security of a vehicle seating system. It is always recommended that the user transfers to the vehicle seating.

8.2 Using your scooter on the train:

If you wish to use your scooter on the train, we recommend that you contact the train operator in advance when planning your journey. Railway carriages have provision for a “wheelchair” space where you can sit on your scooter during the journey. Please note that the overall length of your scooter may be greater than the available length of the “wheelchair” space in the railway carriage.
When planning your journey, you should check with the train operator that there will be suitable boarding access available to allow you to access the railway carriage and the intended “wheelchair” space on joining and leaving the train and there is suitable access onto the platform. We recommend you check with the train operator that ; the boarding access is suitable for the combined mass of your scooter and the occupant; the slope of the access is not greater than the maximum safe slope of the scooter; any steps or risers are no greater than the maximum height of the scooter obstacle climbing height; there is adequate turning space within the access area to the train and on the train.
Most train operators will provide assistance provided that arrangements have been made in advance. We suggest you have you Owner’s Manual ready when planning your journey and contacted them.

8.3 Other Transport requirements:

The scooter may be transported by road, rail, sea or air as luggage.
Before you travel, please contact the appropriate carrier or travel operator. You may be asked to provide certain information about the scooter such as the scooter mass and overall dimensions. This information can be found in the relevant model tables in section 12.0.
If the scooter is transported by air, the batteries may need to be removed as the batteries supplied are not IATA approved for air travel. Your dealer can assist in supplying batteries that are IATA approved.
If transporting the scooter by road as luggage, it may need to be secured to prevent unintended movement into other vehicle passengers in the event of a sudden stop or placed in a space reserved for luggage.

For Elite2 Mini (Fig. 8.1):

Your scooter can be secured by attaching a suitable restraints around the forks at each side of the front wheel and to the rear bumper.

For Elite2 XS / Plus (Fig. 8.2):

Your scooter can be secured by attaching suitable restraints to the transport hooks under the tiller cover (A) and the transport hooks under the seat (B).

Fig. 8.1

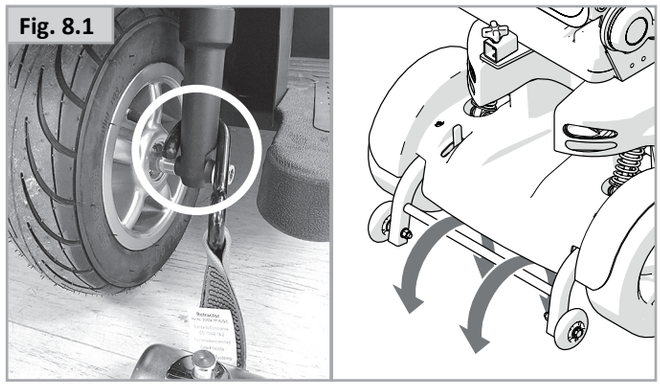
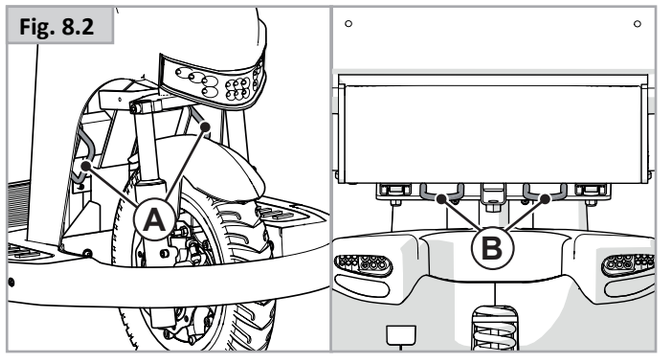


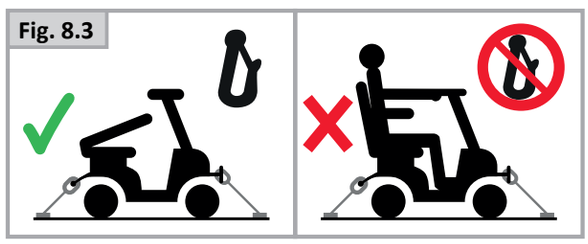
Fig. 8.2



⚠ WARNING!

Do not sit in your scooter when it is transported (Fig. 8.3).

Fig. 8.3



9.0 Maintenance & cleaning

The scooter's lifespan is dependent on it being well maintained.
For information concerning specific settings, maintenance or repair work, please contact your authorized Sunrise dealer. Always be sure to mention the model, year of manufacture and identification number provided on the identification plate of the scooter when contacting your dealer.

⚠ CAUTION!

The scooter should be serviced by your authorized Sunrise dealer once a year or, in the case of intensive use, every six months. For a list of approved authorised dealers in your area please contact Sunrise Medical Service Centre.
The contact details of your local Sunrise medical service centre can be found on the inside front cover of this booklet.
National and International Website addresses are on the back cover.

9.1 Maintenance

⚠ WARNING!

- Loose fasteners should be re-tightened according to the installation instructions.
  Please refer (unless otherwise specified) to the general table below for needed Torques.

Torque Setting Guide	
M4	3.0 Nm
M5	5.9 Nm
M6	10 Nm
M8	25 Nm
M10	48 Nm
M12	84 Nm

  Note: it will be necessary to use a torque wrench.
- If a broken or loose component is found, discontinue use immediately and contact your authorised Sunrise Medical supplier for replacement.

⚠ WARNING!

- If you are in any doubt about the performance requirements of your scooter, contact your Sunrise Medical authorised dealer.
- After performing any maintenance or repairs on the scooter you must make sure that it is functioning correctly before it is used.
- All fasteners must be replaced like for like using the correct length, tensile strength and materials.
- When replacing self-locking nuts, or nuts/studs secured with a thread locking solution, ensure that a suitable thread locking solution is reapplied to the fastener.

Daily checks
Perform the daily check routine before driving as described in chapter 5.1

Weekly checks
Perform the weekly check routine before driving as described below.

Checking Parking brake:
This test should be carried out on a level floor with at least one metre clearance all around the scooter.
- Switch on the control system.
- Check that the battery gauge remains on, or flashes slowly, after one second.
- Push the wig-wag or control lever slowly forwards until you hear the parking brake operate.
- The scooter may start to move.
- Immediately release the control lever. You must be able to hear the parking brake operate (click), within a few seconds.
- Repeat the test a further 3 times, pushing the control lever slowly backwards, left and right.

Checking connectors & cables:
- Check all cables are not loose and secured to the scooter.
- Check the condition of all cables and connectors for damage.

Checking controller:
- Make sure that all components of the wigwag or side throttle are securely mounted.

Checking controls:
- Switch on the scooter – Do the lights flash? This signifies that there is a fault in the electronic system. Refer to chapter 9 for basic troubleshooting
- Operate all of the electric options, including lights and indicators, to make sure that they work correctly.
- Drive the scooter in each of the drive profiles to make sure the scooter performs as it did before.

⚠ WARNING!

- If you are in any doubt about the performance requirements of your scooter, contact your Sunrise Medical authorised dealer.
- After performing any maintenance or repairs on the scooter you must make sure that it is functioning correctly before it is used.
- A complete inspection, safety check and service should be made by a Sunrise Medical authorised dealer at least once per year.
- All fasteners must be replaced like for like using the correct length, tensile strength and materials.
- When replacing self-locking nuts, or nuts/studs secured with a thread locking solution, ensure that a suitable thread locking solution is reapplied to the fastener.
- Check all Velcro fastening straps for correct adhesion when pressed together.
- Ensure that any contamination, such as fluff, hair, etc is removed from the Velcro straps. Such contamination may affect adhesion.

Monthly checks

Perform the monthly check routine before driving as described below.

- All fasteners should be checked monthly for wear, such as loose bolts or broken components.
- Check all straps monthly for fraying, ripped seams or other indications of excessive wear damage. Discontinue use if damage is found.

9.2 Tyre maintenance and pressures

9.2.1 Tyre pressure

⚠ CAUTION!

If pneumatic tyres are fitted to your scooter it is important to regularly check the air pressure and for signs of wear.
The maximum tyre pressures are listed in Section 12.0, if in doubt check the markings on the side of the scooter tyre for guidance.

NOTE: It is important that drive wheels are inflated to equal pressures as a pair, and likewise the rear. The inflator pump provides the safest method of inflating your scooter tyres and the pressure can be checked with a standard motor vehicle pressure gauge.

⚠ DANGER!

- Do not inflate beyond the maximum allowed tyre pressure.
- Always use the pump that is supplied with the scooter.
- Never use a forecourt pump.
- Before tyres are repaired they must first be fully deflated.

9.2.2 Tyre wear

When inspecting the tyres for signs of wear, look for significant scuffmarks, cuts and a diminished tyre tread. Tyres will need to be changed when the tread cannot be seen over the complete surface of the tyre.

9.3 Wheel Removal

⚠ WARNING!

- It is not usually practical to try to repair a puncture at the site of the occurrence. Sunrise Medical suggest that you call for help to remove the scooter either directly to an approved service agent, or to a safe place for collection by the approved agent at a later time.
- If you are in any doubt about the servicing requirements of your scooter, contact your Sunrise Medical authorised dealer.
- Do not attempt any task you are not sure of.
- The scooter must be in drive mode with the power switched OFF and the keys removed, before jacking any wheel off the ground.
- Do not raise more than one wheel of the ground at any one time.

NOTE: Reverse the following procedures to refit the wheels unless otherwise stated.

9.3.1 Elite² XS RS 3-Wheel Front Wheel Removal

- Elevate the front wheel by placing a jack under the relevant jack points, (Fig. 9.1).
- When elevated back up the jack with solid blocks to increase stability, (Fig. 9.11).
- Use a 4.0mm Allen Key to remove the brake anchor stud, (Fig. 9.3).
- Remove the brake cable from the outer sleeve by turning the knurled wheel until the slots align, (Fig. 9.3).
- Lift the brake nipple out of the brake actuator arm, (Fig. 9.4).
- Use a 19.0mm Socket and 10.0mm Allen key to undo the nut, (Fig. 9.5).
- Start to withdraw the axle stud slowly, (Fig. 9.6).
- First the washers will drop out, (Fig. 9.7).
- Next, lift the Brake assembly away from the hub, (Fig. 9.8).
- The spacer falls away, (Fig. 9.9).
- Remove the front wheel assembly, (Fig. 9.10).

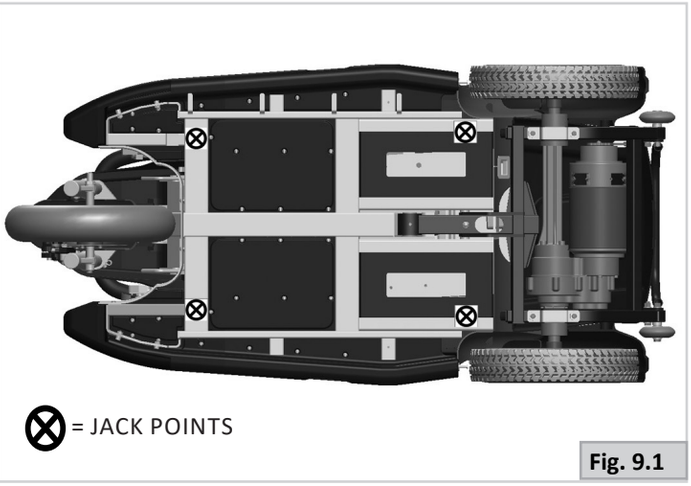


Fig. 9.1


Fig. 9.2

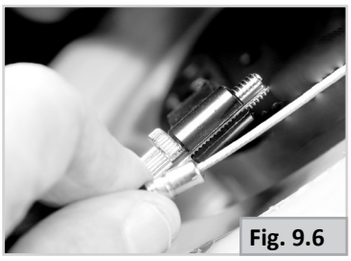


Fig. 9.6


Fig. 9.3

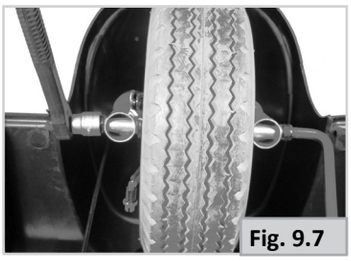


Fig. 9.7


Fig. 9.4

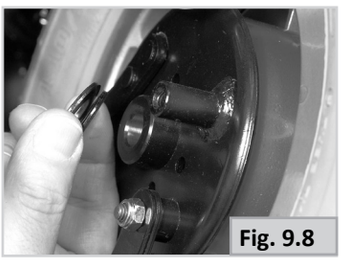


Fig. 9.8

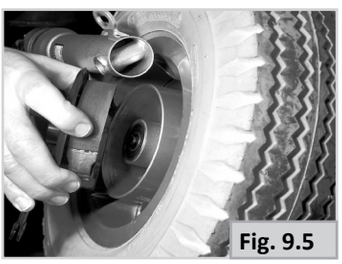


Fig. 9.5


Fig. 9.9


Fig. 9.10

9.3.2 Elite² Plus 3-Wheel Front Wheel Removal

- Elevate the front wheel by placing a jack under the relevant jack points, (Fig. 9.1).
- When elevated back up the jack with solid blocks to increase stability, (Fig. 9.11).
- Use a 5.0mm Allen Key to remove the two disc brake anchor studs, (Fig. 9.12).
- Gently lift the disk brake calliper off, (Fig. 9.13).
- Use a 10.0mm Allen key, (Fig. 9.14), and a 19.0mm socket, (Fig. 9.15), to remove the axle nut.
- Slowly pull the axle stud back through the front forks, **NOTE:** you may have to gently tap the axle stud to free it.
- Remove the large spacer, (Fig. 9.16).
- Remove the small spacer, (Fig. 9.17).
- Withdraw the axle stud, (Fig. 9.18).
- Gently lift the front wheel out, (Fig. 9.19).

9.3.3 Elite² XS RS Rear Wheel Removal

- Use a flat bladed screwdriver to carefully lever off the hub cover, (Fig. 9.20).
- With the wheel still on the ground: use a 19.0mm socket to loosen the hub nut, but do not release the nut more than two turns, (Fig. 9.21).
- Elevate the rear wheel by placing a jack under the relevant jack points, then secure with blocks, (Fig. 9.22).
- Use the socket wrench to finish releasing the nut.
- Remove the nut and washer, (Fig. 9.23).
- Carefully remove the wheel, (Fig. 9.24).
- Remove the drive key from the drive shaft and keep it in a safe place, (Fig. 9.25).


Fig. 9.11


Fig. 9.12


Fig. 9.13


Fig. 9.14


Fig. 9.15

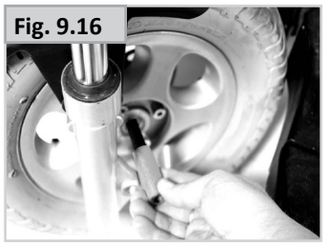


Fig. 9.16


Fig. 9.17


Fig. 9.18


Fig. 9.19

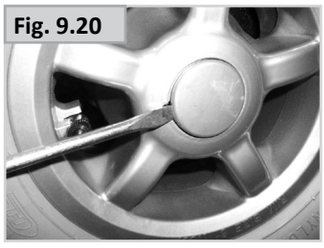


Fig. 9.20


Fig. 9.21


Fig. 9.22

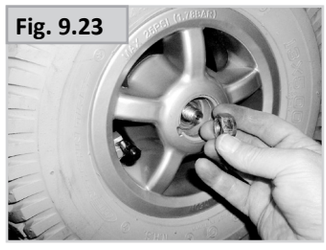


Fig. 9.23


Fig. 9.24


Fig. 9.25

9.3.4 Elite² Plus Rear Wheel Removal

- Use a flat bladed screwdriver to carefully lever off the hub cover (Fig. 9.26).
- With the wheel still on the ground: use a 6.0mm Allen key to loosen the 4 rim studs, but do not release the studs more than two turns (Fig. 9.27).
- Elevate the rear wheel by placing a jack under the relevant jack points, then secure with blocks (Fig. 9.28).
- Use the Allen key to finish releasing the studs.
- Remove the studs and washers (Fig. 9.29).
- Carefully remove the wheel (Fig. 9.30).
- Do not remove the drive hub from the drive shaft (Fig. 9.31).


Fig. 9.26


Fig. 9.27


Fig. 9.28


Fig. 9.29


Fig. 9.30


Fig. 9.31

9.4 Changing the Inner Tube (All)

- Ensure any remaining air is expelled by pressing the valve with a small screwdriver and squeezing the tyre, (Fig. 9.32 - 9.33).
- Use a 6.0mm Allen key to undo the FIVE rim studs, (Fig. 9.34).
- Lift the outer rim off, (Fig. 9.35).
- Lift the tyre of the inner rim, (Fig. 9.36).
- Gently get hold of the inner tube just behind the valve.
- Carefully feed the tube out of the tyre, (Fig. 9.37).

NOTE: Solid tyres are chemically bonded to the wheel rims. These must be changed as a complete assembly.

To refit:

- Place the tube inside the tyre and rest it on the outer rim.
- Align the valve stem with the cut out on the rim, (Fig. 9.38).
- Face the valve stem outward, (Fig. 9.38).
- Place the inner rim over the tyre, tube and outer rim.
- Align the cut out to fit over the valve stem and match it up to the cut out in the outer rim, (Fig. 9.38).
- Make sure the stud mounts are in line on both rims.
- Tighten the studs evenly in the sequence shown, going around once to close the rims and then again to tighten fully taking, care not to pinch the tube, (Fig. 9.39).
- Slowly inflate to the appropriate pressure.

⚠ **WARNING!**

Do not use high-pressure air delivery systems such as those found on garage forecourts, to inflate the scooter tyres. Always use a new inner tube.

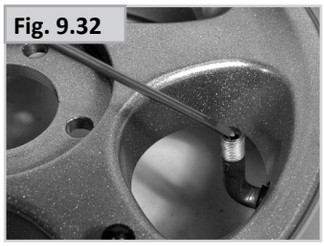


Fig. 9.32


Fig. 9.33


Fig. 9.34


Fig. 9.35


Fig. 9.36


Fig. 9.37

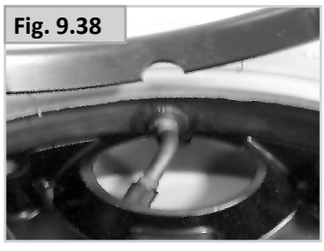


Fig. 9.38

Fig. 9.39

Maintenance and Inspection Schedule	Daily	Weekly	Quarterly	Six month	Annually
Check battery level indicator and charge if necessary.	●				
Check the control levers on the tiller are not bent or damaged.	●				
Ensure all removable parts are securely fastened.	●				
Check lap strap for wear and make sure the buckle is operational.	●				
Check the Parking brake clicks on and off.		●			
Check tyres and inflate if required.		●			
Ensure any visible nuts and bolts are tight.		●			
Ensure all cables and connectors are sound, tidy and out of the way.		●			
Clean the scooter and upholstery regularly.		●			
Battery terminal inspection – Remove any corrosion and apply Vaseline.			●		
Check upholstery, seating, headrests, arm pads for wear.				●	
Complete inspection, safety check and service should be made by a Sunrise Medical authorised dealer.					●

NOTE: Please refer to the Elite2 service manual for further details on preventative maintenance.

9.5 Lighting maintenance:

⚠ DANGER!

Maintaining lights and indicators is a safety critical task. If your lights and indicator system shows a defect, please contact your Sunrise Medical Approved Dealer.
All lights and indicators are state of the art LED low energy, no maintenance units. There are no light bulbs used. The high intrinsic reliability of these units means that they are extremely unlikely to fail under normal usage. If a failure should occur, (may be because of an impact), the damaged light assembly must be replaced in its entirety. The individual LED's cannot be replaced.

⚠ CAUTION!

- Only use Sunrise Medical authorized spare parts.
- Be advised that all lighting circuits are electronically protected. In the event of a short-circuit current will be limited to a safe level. Once the fault is removed the control system resets automatically.

9.6 Cleaning and disinfection

The scooter should be wiped over once per week with a slightly damp, not wet, cloth and any fluff or dust that has accumulated around the motors should be blown or dusted away.

⚠ CAUTION!

Make sure that you dry all parts of your scooter if it becomes wet or damp after cleaning or if it is used in a wet or damp atmosphere.

⚠ DANGER!

It is important that should the scooter be used by more than one person it is cleaned thoroughly to ensure there is no cross infection.

Hygiene measures when being re-used:

Prior to the wheelchair being re-used, it must be carefully prepared. All surfaces which come into contact with the user must be treated with a disinfection spray.

To do this, you must use a disinfectant as authorised/ recommended in your country, for rapid alcohol-based disinfection for medical products and medical devices, which must be disinfected quickly.

Please take into account the manufacturer's instructions for the disinfectant you are using.

In general, a complete disinfection cannot be guaranteed on seams. We therefore recommend that you dispose of seat and back slings to avoid microbacterial contamination with active agents according to your local infection protection law.

⚠ CAUTION!

- Do not use solvents, bleaches, abrasives, synthetic detergents, wax polishes or aerosols.
- Disinfectants may be used in dilution as specified by their manufacturer.
- Ensure surfaces are rinsed with clean water and dried thoroughly.
- Do not use a hose or a pressure or steam washer to clean your scooter.

⚠ WARNING!

- Always read the label on any commercial or domestic cleaning substances.
- Always follow the instructions carefully.

Cleaning controls: & Controller

Should the control of your scooter become soiled or dirty, it can be wiped with a damp cloth with a dilute disinfectant until clean.

9.7 Medium to long term storage:

When storing your scooter for long periods of time (in excess of one week), follow these simple instructions:

- Fully charge the scooter for at least 24 hours.
- Disconnect the charger.
- Disconnect the batteries.

⚠ WARNING!

Never store your scooter:

- Near a source of direct heat.
- In direct sunlight, as continued exposure to UV rays may weaken plastic and foam parts, i.e. panels, hand grips, etc. and fade labels.
- In a damp environment.
- In a cold environment.
- With the batteries/battery boxes connected, (even if the controller is switched off).

Avoiding all of the above will minimise battery deep cycle discharge and extend battery lifetime.
When returning the scooter to use, please reconnect the batteries/battery boxes and charge the scooter for at least 24 hours before use.

9.8 Storage temperature & humidity:

Storage Temperature: Min: -25°C, (-40°C without batteries) Max: 50°C.
Relative Humidity (non-condensing): Min: 5% Max: 95%.

10.0 Troubleshooting

If the scooter is not working as it should, check the following points.

- Check whether the batteries are charged.
- Turn the scooter off and then back on again.
- Check whether the battery plugs are all securely in place.
- Check whether the freewheel lever is in the DRIVE position
- Check the position of the speed regulator.

Fig. 10.1

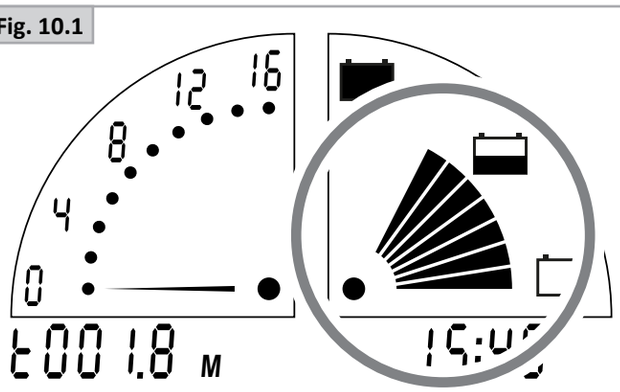


Fig. 10.2

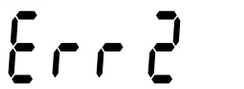


Fig. 10.3

10.1 Elite² Plus display

(Fig. 10.1)
Always consult your Sunrise Medical authorised dealer when a diagnostic fault has appeared on your scooter display.

Elite² PLUS Fault - The battery gauge shows the status of the control system, and the fault graphic on the display.

Battery Gauge is steady
This indicates that everything is OK.

Battery Gauge flashes slowly
The control system is functioning correctly but the batteries need charging as soon as possible.

Battery Gauge steps up
The scooter batteries are being charged. You will not be able to drive the scooter until the charger is disconnected and you have switched the control system off and on again.

Battery Gauge flashes rapidly
The control system safety circuits have operated and the control system has been prevented from moving the scooter. This indicates a system trip. i.e. the power module has detected a problem somewhere in the scooters electrical system.

- Switch the scooter off.
- Check that none of the plugs and sockets have become loose or disconnected.
- Check the condition of the battery.
- If you cannot find the problem, try the self-help guide on the next page.
- Switch the scooter on again and try to drive the scooter.
- If the safety circuits operate again, switch off and do not try to use the scooter.
- Contact your Sunrise Medical authorised dealer.

10.2 Elite² XS Display

Always consult your Sunrise Medical authorised dealer when a diagnostic fault has appeared on your scooter display.

Elite² XS,RS Fault - The LCD displays the fault bar number, (Fig. 10.2).

In case of a brake fault (4 bar) the display will show, **"brake"** and the horn will sound, (Fig. 10.3).

The displays above indicate the control system safety circuits have operated and the control system has been prevented from moving the scooter.

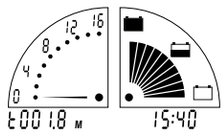
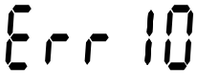
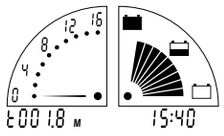
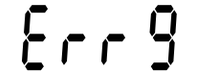
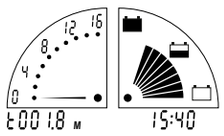
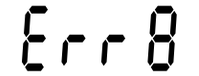
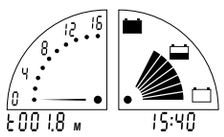
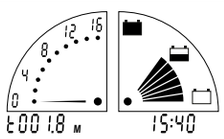
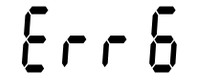
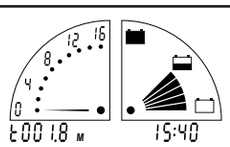
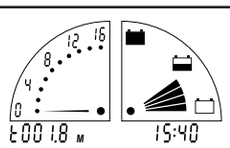
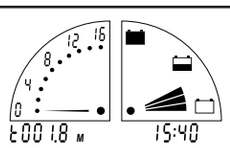
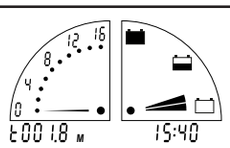
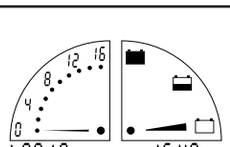
This indicates a system trip. i.e. the power module has detected a problem somewhere in the scooters electrical system.

- Switch the scooter off.
- Check that none of the plugs and sockets have become loose or disconnected.
- Check the condition of the battery.
- If you cannot find the problem, try the self-help guide on the next page.
- Switch the scooter on again and try to drive the scooter.
- If the safety circuits operate again, switch off and do not try to use the scooter.
- Contact your Sunrise Medical authorised dealer.

NOTE: Taking the scooter from a warm indoor environment to very cold outside surroundings may cause the display to mist for a short time. This is harmless and will clear quickly.

10.3 Fault Codes and Possible Causes

Fig. 10.4

Elite² Plus	Elite² XS	
		**An excessive voltage has been applied to the Power Module.** *Check the battery connections.* *Check the correct battery charger is being used and that it is functioning properly.*
		**The parking brake has a bad connection.** *Check all connections between Motor, Brake and Power Module.*
		**A general control system fault has been detected.** *Check that all plugs and sockets are connected.* *If the scooter has been driven in extreme weather, gone through a deep puddle or has been jet washed, place it in a dry warm environment to dry out.*
		**A throttle fault has been detected.** *Ensure that the throttle levers are at the neutral or rest position.*
		**The scooter is being prevented from driving by the control system because of an inhibit signal.** *Check that the charger plug is disconnected from the charge socket.*
		**This is not used.**
		**The freewheel lever/switch is activated.** *Switch the scooter off; put the scooter back into "DRIVE" mode and switch the scooter back on again.*
		**The Motor has a short-circuit to a battery connection.** *Contact your servicing agent.*
		**There is a bad connection to the Motor.** *Check all connections to the Motor and Power Module.* *Check Motor brushes.*
		**The battery needs charging or there is a bad connection to the battery.** *Charge the batteries.* *Check the connections to the batteries are tight.* *Check the battery charger is switched on and working.* *Batteries need changing.*

11.0 Disposal

The symbols below mean that in accordance with local laws and regulations your product should be disposed of separately from household waste. When this product reaches the end of its life, take it to the local collection point designated by local authorities. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects the environment.

Ensure you are the legal owner of the product prior to arranging for the product disposal in accordance with the above recommendations and national requirements.

In the following section, there is a description of the materials used on the scooter, in view of the disposal or recycling of the scooter and its packaging.

There may also be special local regulations in force with regard to disposal or recycling, these must be taken into account when disposing of your scooter. (This can include the cleaning or decontamination of the scooter prior to disposal).

Aluminium: Wheels, motor/gearbox
Steel: Fixing points, frame, seat, seat frame
Plastic: Handles, tube stoppers, shrouds
Packaging: Plastic bags made of soft polyethylene, cardboard
Rubber: Tyres

Disposal or recycling should be done through a licensed agent or authorised place of disposal. Alternatively, your scooter may be returned to your dealer for disposal.

12.0 Specification Sheets (EN 12184 & ISO 7176-15)

CE This product complies with the regulations and guidelines for medical aids and carries a CE symbol.
The product meets the requirements and standards below. These are checked by independent institutions.
EN ISO 10993-5:2009
Biological evaluation of medical devices - Part 5: Tests for in vitro cytotoxicity (ISO 10993-5:2009)

Standard	Definition / description		Test Dummy Weight	
Medical Device Regulation (EU) 2017/745	Applicable as mentioned in Appendix 1			
EN 12182: 2012	Assistive products for persons with disability - General requirements and test methods		-	-
Class B	Elite² Mini		136 kg	
Class C	Elite² XS	Elite² Plus	175 kg	
EN 12184: 2014	Electrically powered wheelchairs, scooters and their chargers - Requirements and test methods		-	-
Class B	Elite² Mini		136 kg	
Class C	Elite² XS	Elite² Plus	175 kg	
ISO 7176-8: 2014	Requirements and test methods for impact, static and fatigue strengths		N/A	N/A
ISO 7176-9: 2009	Climate tests for electric wheelchairs		N/A	N/A
ISO 7176-14: 2008	Requirements and test methods for control systems for electric wheelchairs		N/A	N/A
ISO 7176-16: 2012	Requirements for resistance to ignition of upholstered parts		N/A	N/A

Model	Sterling Elite² Mini		
Max. user weight	136kg	300lb	
EN12184 class:	B	-	

Description	Metric system values		Imperial system values & alternative		Comments
ISO 7176-15	**MIN.**	**MAX.**	**MIN.**	**MAX.**	
Total length	1270mm	1341mm	50.0”	52.8”	standard configuration, without basket and with basket
Total width	610mm		24.0”		
Total weight	110kg		242.5lb		standard configuration with batteries
Transport weight of the heaviest part					
60Ah Battery	19.8kg		43.6lb		
Seat with slide	19kg	19.7kg	41.9lb	43.4lb	without headrest / with headrest
Dynamic stability (rated slope)					136kg User
with 90A controller	9˚				
with 120A controller	9˚				
Min. braking distance at maximum speed	-	2930mm	-	115.4”	
Static stability	15˚/15˚/15˚				Downwards / Upwards / Sideways
Range of action (ISO 7176-15)	25km	38.8km	15.5mi	24.1mi	NB: The following aspects have a negative influence on the range of action: Obstacles, rugged terrain, driving on slopes, exposure to temperatures below freezing point and frequent use of powered seat options.
Climbing capability for obstacles	72mm		2.8”		
Max speed forward	10 kph	12 kph	6.2mph	7.4mph	
Turning radius	1230 mm		48.4”		
Turning space / reversing width	1500 mm		59.0”		
Ground clearance	50 mm		2.0”		
Tyre Pressure	1.8 bar	2.4 bar	26 PSI	35 PSI	
Maximum battery dimensions (l x b x h)	197 x 167 x 155	255 x 170 x 175	7.7” x 6.6” x 6.1”	10” x 6.7” x 6.9”	
Battery capacity	40 Ah / 60 Ah		-		
Maximum permissible charging voltage	-	24V	-	-	
Maximum charging current	-	10A	-	-	
Effective seat depth	440 mm		17.3”		
Effective seat width	470 mm		18.5”		
Seat to floor height	450 mm	520 mm	17.7”	20.5”	to scooter floor
Back rest angle	-45˚	+45˚	-	-	
Back rest height	500 mm		19.7”		
Seat adjustment	-68mm	+68mm	-2.7”	+2.7”	Front - rear, from centre position
Armrest height	260 mm		10.2”		To seat surface at 90˚

Model	Sterling Elite² XS		
Max. user weight	175kg	385.8lb	
EN12184 class:	C	-	

Description	Metric system values		Imperial system values & alternative		Comments
ISO 7176-15	**MIN.**	**MAX.**	**MIN.**	**MAX.**	**COMMENTS**
Total length	1390mm		54.7”		standard configuration
Total width	670mm		26.4”		
Total weight	132 kg		291lb		standard configuration with batteries
Transport weight of the heaviest part 72Ah Battery Seat with slide	 23.0Kg 22.0kg		 50.7lb 48.5lb		
Dynamic stability (rated slope)	10˚		-		175 kg User
Min. braking distance at maximum speed	-	4500mm	-	177.2”	
Static stability	15˚/15˚/15˚		-		Downwards / Upwards / Sideways
Range of action (ISO 7176-15)	35.7km		22.2mi		NB: The following aspects have a negative influence on the range of action: Obstacles, rugged terrain, driving on slopes, exposure to temperatures below freezing point and frequent use of powered seat options.
Climbing capability for obstacles	100mm		3.9”		
Max speed forward	10 kph	15 kph	6.2mph	9.3mph	+ 10%
Turning radius	1400 mm		55.1”		
Turning space / reversing width	1850 mm		72.8”		
Ground clearance	110 mm		4.3”		
Tyre Pressure	1.8 bar	2.4 bar	26 PSI	35 PSI	
Maximum battery dimensions (l x b x h)	255 x 170 x 175		10” x 6.7” x 6.9”		
Battery capacity	60 Ah / 72 Ah		-		
Maximum permissible charging voltage	-	24V			
Maximum charging current	-	10A			
Effective seat depth	450 mm		17.7”		
Effective seat width	475 mm		18.7”		
Seat to floor height	445 mm	495 mm	17.5”	19.5”	to scooter floor
Back rest angle	-45˚	+45˚	-	-	
Back rest height	540 mm		21.3”		
Seat adjustment	-80mm	+80 mm	-3.1”	+3.1”	Front - rear, from centre position
Armrest height	260 mm		10.2”		To seat surface at 90˚

Model	Sterling Elite² Plus		
Max. user weight	175kg	385.8lb	
EN12184 class:	C	-	

Description	Metric system values		Imperial system values & alternative		Comments
ISO 7176-15	**MIN.**	**MAX.**	**MIN.**	**MAX.**	**COMMENTS**
Total length	1390mm		54.7”		standard configuration
Total width	650mm		25.6”		
Total weight	140 kg		308.6lb		standard configuration with batteries
Transport weight of the heaviest part 72Ah Battery Seat with slide	 23.0Kg 22.0kg		 50.7lb 48.5lb		
Dynamic stability (rated slope)	10˚		-		175 kg User
Min. braking distance at maximum speed	-	4500mm	-	177.2”	
Static stability	15˚/15˚/15˚		-		Downwards / Upwards / Sideways
Range of action (ISO 7176-15)	35.7km		22.2mi		NB: The following aspects have a negative influence on the range of action: Obstacles, rugged terrain, driving on slopes, exposure to temperatures below freezing point and frequent use of powered seat options.
Climbing capability for obstacles	100mm		3.9”		
Max speed forward	10 kph	15 kph	6.2mph	9.3mph	+ 10%
Turning radius	1400 mm		55.1”		
Turning space / reversing width	1850 mm		72.8”		
Ground clearance	135 mm		5.3”		
Tyre Pressure	1.8 bar	2.4 bar	26 PSI	35 PSI	
Maximum battery dimensions (l x b x h)	255 x 170 x 175		10” x 6.7” x 6.9”		
Battery capacity	60 Ah / 72 Ah		-		
Maximum permissible charging voltage	-	24V			
Maximum charging current	-	10A			
Effective seat depth	450 mm		17.7”		
Effective seat width	475 mm		18.7”		
Seat to floor height	445 mm	495 mm	17.5”	19.5”	to scooter floor
Back rest angle	-45˚	+45˚	-	-	
Back rest height	540 mm		21.3”		
Seat adjustment	-80mm	+80 mm	-3.1”	+3.1”	Front - rear, from centre position
Armrest height	260 mm		10.2”		To seat surface at 90˚

13.0 Warranty

THIS GUARANTEE DOES NOT AFFECT YOUR LEGAL RIGHTS IN ANY WAY.

Sunrise Medical* provides a guarantee, as set out in the warranty conditions, for products to its customers covering the following.

Warranty conditions:

1. Should a part or parts of the product require repair or replacement as a result of a manufacturing and/or material fault within 24 months, then the affected part or parts will be repaired or replaced free of charge. The warranty will only cover manufacturing defects

2. To enforce the warranty, please contact the supplier of your scooter – e.g. the Sunrise Medical Approved dealership or Healthcare provider with the exact details of the nature of the difficulty. Should you be using the product outside the area covered by the Sunrise Medical customer service agent, repairs or replacement will be carried out by another agency as designated by the manufacturer. The product must be repaired by a Sunrise Medical designated Customer Service agent, (dealer).

3. For parts, which have been repaired or exchanged within the scope of this warranty, we provide a warranty in accordance with these warranty conditions for the remaining warranty period for the product in accordance with point 1.

4. For original spare parts which have been fitted at the customer's expense, these will have a 12 months guarantee, (following the fitting), in accordance with these warranty conditions.

5. Claims from this warranty shall not arise, if a repair or replacement of a product or a part is required for the following reasons:

   a. Normal wear and tear, which include but is not limited to the following parts where fitted; batteries, armrest pads, upholstery, tyres, brakes shoes, ferrules, etc.
   b. Any overloading of the product, please check the EC label for maximum user weight.
   c. The product or part has not been maintained or serviced in accordance with the manufacturer's recommendations as shown in the user instructions and/or the service instructions.
   d. Accessories have been used which are not specified as original accessories.
   e. The product or part having been damaged by neglect, accident or improper use.
   f. Changes/modifications have been made to the product or parts, which deviate from the manufacturer's specifications.
   g. Repairs have been carried out, before our Customer Service has been informed of the circumstances.

6. This guarantee is subject to the law of the country in which the product was purchased from Sunrise Medical"

7. Life expectancy

   We estimate a life expectancy of eight years for this product, provided that:

   - It is used in strict accordance with the intended use as set out in this document.
   - All maintenance and service requirements are met.

   The estimated life expectancy can be exceeded if the product is carefully used and properly maintained, provided that technical and scientific advances do not result in technical limitations.

   The life expectancy can also be considerably reduced by extreme or incorrect usage.

   The fact that we estimate a life expectancy for this product does not constitute an additional warranty..

* Means the Sunrise Medical facility from which the product was purchased.

Additional Notes For Australia Only:

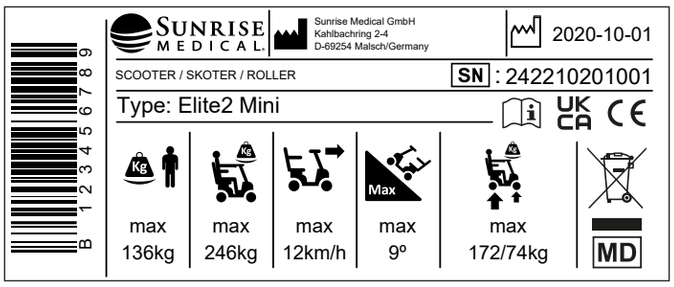
i. For goods provided by Sunrise medical Pty Ltd in Australia, our goods come with a guarantee by Sunrise Medical that cannot be excluded under Australian Consumer Law.

ii. You are entitled to a replacement or refund for a major failure and for compensation for any foreseeable loss or damage.

iii. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

iv. The benefits to you given by this warranty are in addition to your other rights and remedies under a law in relation to the goods to which the warranty relates.

14.0 Name Plate



TYPE:	Product Name/SKU Number.
	Maximum safe slope with anti-tip tubes fitted, Depends on scooter setting, posture and physical capabilities of the user.
	Maximum user weight.
	Maximum axle loading.
	Maximum total weight.
UK CA	UKCA Mark.
CE	CE Mark.
MAX X/X mi/h km/h	Maximum speed.
	Consult instructions for use.
	Indicates electrical / electronic equipment must be disposed of in accordance with the WEEE regulation.
XXXX-XX-XX	Date of manufacture.
SN	Serial number.
MD	This symbol means Medical Device.
	Manufacturer's address.
	Importer's address
UK RP	UK Responsible Person
CH REP	Swiss Representative's address

ISO 7010-M002

Instruction manual/booklet must be read! (Blue Icon)

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OM_Elite2 Mini XS Plus_EU_EN_
Revl_2024-11-21

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